The Latin Model of Welfare: Do 'Insertion Contracts' Reduce Long-Term Dependence?

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Abstract

This paper aims to present an assessment of the welfare policies implemented in most South European countries. Welfare programs in these countries try to combine a basic level of economic protection and measures favoring life and labor skills ('insertion benefits') of low-income households. We focus on a specific program set up with the twofold strategy of cash and 'insertion benefits' (Madrid's IMI) and, more precisely, on the so-called 'insertion projects', consisting in a gradual mix of job search assistance, training and subsidized jobs. We evaluate the effects of these 'insertion projects' on welfare recidivism and the duration of off-welfare spells using propensity score-matching methods. Our results suggest that propensity score estimators appear to reduce selectivity due to non-random participation. Both recidivism rates as well as the duration of off-welfare spells suggest potentially successful interventions.

JEL Classification: I38, C21, C41

Keywords: welfare, recidivism, insertion contracts, propensity score

1. INTRODUCTION[1]

Public assistance programs continue to be the focus of much concern. There is a growing conviction that welfare policies favor behavior leading to dependency on Public Assistance and consequently to a reduction in the intensity of job searching. As a result, most OECD countries have put restrictive reforms into effect, establishing stricter time limits and imposing more onerous obligations on those receiving benefits. Public Assistance programs have also undergone major changes to foster transitions from welfare to work. Within public policy discussions of welfare programs, there is no doubt that the big picture of work incentives has become the major topic of concern.

A range of welfare reforms strengthening the role of training and financial incentives for low-income families has taken place in many of the Western welfare states. The scope of these reforms varies considerably across countries. In the United States, work and self-sufficiency have moved to center stage. The Temporary Assistance for Needy Families (TANF) program introduced a new block grant setting specific employment targets for welfare recipients[2]. In the United Kingdom, new policies focusing on low-income families with children have also been put into action, combining Social Assistance reforms with earned income tax credits[3]. Since the mid 1990s, Nordic countries have also included activation measures in the field of Social Security and labor market policies[4]. The purpose of a complex set of programs was to improve the long-term position of welfare recipients in the labor market by providing subsidized work experience and training. The Netherlands is no exception to these trends and is usually seen as one of the forerunners[5].

The characteristics and results of welfare reforms in other countries are considerably less well-known. This is the case, among others, of the European Latin models. New welfare designs were introduced some years before reforms were implemented in other OECD

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[2] The literature reviews of the welfare reforms implemented across the United States is enormous. For a synthetic overview see Moffitt and Ver Ploeg (2001), Blank (2002), and Grogger *et al.* (2002).

[3] For a comprehensive summary of the British reforms, see Blundell and Meghir (2002), and Hills and Waldfogel (2004).

[4] See Hvinden (2000), Lødemel and Trickey (2000), Sianesi (2004), and Carling and Richardson (2004).

[5] For a critical review of the Dutch activation measures taken in the field of social security and labor market policy see Van Oorschot (2002) and Van den Berg *et al.* (2004).

countries. By the later 1980s France and Spain had put into practice a new social tool trying to reconcile two different objectives: on the one hand, it aims to provide a basic level of economic protection and, on the other, it endeavors to carry out measures to favor life skills and the labor market participation of low-income households ('social insertion' measures). In France, the so-called *Revenu Minimum d'Insertion* is payable only on the condition that a contract for 'insertion' has been negotiated with the recipient. In Spain, these contracts have been generalized on a territorial base, with diverse employment outcomes. In Italy and Portugal, promoting labor insertion while maintaining economic security has also become the primary goal of welfare policy[6].

After 15 years of development, we still have relatively little insight into what effects are promoting 'insertion contracts' in the self-sufficiency of former welfare recipients[7]. This paper aims to present an assessment of this alternative model (the 'Latin model') for welfare reform in improving the long-term position of former welfare recipients. We focus on a specific welfare program set up with the twofold strategy of cash and insertion benefits. Madrid's *Ingreso Madrileño de Integración* (IMI) is a standard program within the complex set of national and regional schemes existing in South Europe. Like other European systems, a main difference from U.S. programs is that welfare covers all households. The most distinctive feature is that all recipients must sign an 'insertion' contract. Social workers are obliged to create specific insertion measures for each one of the IMI recipients. We focus on the so-called 'insertion projects', consisting in a gradual mix of job search assistance, training and subsidized jobs. IMI's longitudinal data are considerably longer than those used in other studies. They include very detailed and precise information, and there are a larger number of observations and fewer biases.

Unlike the specialized literature on the U.S. where earnings and employment results have been a major focus, we evaluate how 'insertion projects' contribute to reducing welfare recidivism. Much of the debate on welfare reform has focused on self-sufficiency.

[6] In Italy, an experimental design of a new welfare scheme combining insertion and income was set up in 1999 (*Reddito minimo di inserimento*). For a detailed review of the possibilities and limits of this new model see Pasquinelli (2002), and Benassi and Mingione (2002). In Portugal, a pilot experience was also initiated in 1997 and has become a nationally effective system. Both financial incentives and 'insertion contracts' were the cornerstone of the new program (Capucha, 1988). Recently, different reforms have been implemented to reinforce the insertion side of the program. Empirical evaluations show a sharp improvement in the measures of poverty intensity and severity (Farinha Rodrigues, 2004).

[7] An exception for the French experience is Zoyem (2001). He finds that 'insertion contracts' foster exits from welfare to subsidized employment or part-time jobs but with no substantial improvements in competitive employment.

Recidivism rates are close to an overall notion of welfare dependence. We also analyze the time spent outside the program for participants and non-participants recipients in these 'insertion projects'. The length of this time period can also be interpreted as an indicator of welfare independence.

The structure of the paper is as follows. The main theoretical grounds are set out in the next section. We turn then to the particular design features of the IMI and 'insertion projects' and review recipiency and recidivism patterns. In the following section, we evaluate the effects of 'insertion projects' on welfare recidivism and the duration of off-welfare spells using propensity score-matching methods. The paper ends with a brief list of conclusions.

2. BACKGROUND

2.1. *The economic rationale for 'insertion contracts'*

Over the last decade, evaluations of welfare reforms designed to move welfare recipients into the labor market have increased considerably. An outstanding result of the review of the literature is the mixed and sometimes discrepant findings of empirical studies[8]. One reason for this somewhat contrasting evidence is a potential aggregation bias in the evaluation of welfare-to-work programs. Short-term and work-first strategies are usually considered together with human capital and intensive training programs. The economic rationale of these two overall types of measures, however, is very different. Work-first strategies try to push recipients into the labor market as rapidly as possible. On the other, long-term programs focus on human capital developments through intensive training and educational opportunities for recipients[9]. In fact, differential effects are found when considering the results of both strategies within the framework of the same program (Hotz *et al.*, 2000).

[8] See Cancian *et al.* (1999), Freedman *et al.* (2000), Leahey (2001), Moffitt (2001), Barnow and Gubits (2002), Blank (2002) and Bloom *et al.* (2004).

[9] Regarding the outcomes of both strategies, there is little evidence that human capital investment programs have resulted in higher earnings or more work hours (Freedman *et al.*, 2000). However, using matching methods Hotz *et al.* (2000) find that in the long-term those who receive intensive training present better results than those who were put into work-first programs.

While the U.S. has been trying to combine both strategies, the former has been at the heart of its welfare reforms since the mid 1990s. Most European welfare systems, however, have made significant progress in shifting to work-oriented assistance schemes through long-term human capital measures. This is the case in most of the 'insertion contracts' (ICs) implemented in some Southern European countries. Through linking alternative 'insertion' measures to the recipients' employability levels and life skills a large percentage of individuals become engaged in intensive training and pre-competitive employment initiatives. The ICs concept fits well with the economic rationale for human capital developments in a welfare framework. The improvement of labor skills should reduce welfare dependence while increasing the recipient's living standards.

Two possible difficulties emerge when considering the potential success of ICs. First, a common feature of the estimates of the recipients' employability in different countries is the high degree of heterogeneity among the potential beneficiaries of employment-focused strategies. In the United States, there is a growing and widespread concern that families who are currently receiving TANF benefits face multiple and significant barriers to employment, and therefore need more assistance (Pavetti and Strong, 2001). Similar problems have been found in the countries implementing ICs[10]. For these households the associated costs of training or other intensive human capital initiatives could be especially high.

Second, ICs' contribution to the aforementioned social improvements largely depends on the commitment of recipients to staying long enough in the program-operated training and subsidized employment devices. The opportunity cost of participation could be too high, especially in periods of strong economic growth with higher earnings and employment levels. Following Moffitt's (2002) analysis for a two-period model, the individual's participation decision will depend on the net present value of the investment opportunity (NPV):

$$\text{NPV} = -w_1(1-t)\text{I} + \frac{1}{1+r}\{P_2[(w_2-w_1)(1-\text{t})H_2] + (1-P_2)\,[(w_2-w_1)H_2 - (G - tw_1H_2)]\} \qquad (1)$$

[10] INSEE data for the French *Revenu Minimum d'Insertion* show that 71.7% of recipients have difficulties with expression in their own language and two-thirds have only primary or lower educational levels. A pattern of recipients grouping them into three different categories —no problems entering the labor market in the near term, requiring intensive training, suffering multiple material hardship— noted by different authors at the beginning of the 1990s [Vanlerenberghe (1992), Paugam (1993)] seems still to be present several years later.

where w_1 represents the wage if the individual were not to undergo the training program, w_2 is the wage in the period two if she/he does, I is the time devoted to investment in period one, H_2 is the number of hours worked in period two, P_2 is a dummy in period two reflecting whether the individual undergoes the program, and G is the benefit amount. If the net present value is positive, a reasonable assumption can be made that the 'insertion contract' will increase the recipient's utility. A foreseeable result should be that take-up rates will be high and the duration of the first welfare spell would be longer compared with that of recipients not engaged in intensive training.

2.2. *Indicators of Success*

Attempts to evaluate both work-first and human capital strategies have almost exclusively focused on examining the changes in employment or earnings levels. A key question, however, is to what extent labor market indicators are the best measures for an adequate understanding of the programs' effectiveness in the countries under study. In practice, evaluation of welfare reforms crucially depends on the indicators chosen to measure the programs' outcomes. Cancian and Meyer (2004) found a sizeable sensitivity of conclusions to alternative ways of measuring the success of U.S. welfare reforms through independence from Public Assistance, income poverty and material hardship indicators[11]. Alternative indicators can only lead to similar conclusions if they measure the same type of processes.

Among the range of options to evaluate the success of ICs, the indicators that suit better the final goals of the programs are those specifically reflecting the notion of 'welfare independence'. In a broad interpretation, independence can be considered as the lack of necessity of support from the government[12]. In this paper, we focus on recidivism patterns as the main parameter for evaluation of the ICs' effectiveness. On one hand, the increase in the number of studies focusing on the dynamics of welfare participation has revealed that a

[11] Substantial differences can also be found when analyzing some of these specific indicators. This is the case of the net income-increasing or poverty-reducing impacts surveyed by Blank (2002). While most studies calculating poverty among welfare leavers find very high rates, the magnitude of the estimated effects considerably diverges.

[12] Sociological interpretations may enlarge the scope of the definition. As Lichter and Jayakody (2002) point out, a key question could be whether the reforms will ultimately attenuate the intergenerational transmission of welfare by promoting work values and traditional families.

high percentage of recipients return to the programs in the near term[13]. On the other, one of the huge differences among American and European labor markets for low-income households is the considerably lower employment rate in Europe for these individuals. A reasonable assumption could also be made that the probability of returning to the programs for former recipients might be high.

Two different indicators can be considered when regarding reduced recidivism as the success outcome. The most basic measure is to compare recidivism rates among participants and non-participants in the reform under study. It is also possible to use a second-best indicator taking into account the time spent outside the program due to previous participation in intensive training activities or other forms of human capital accumulation. A policymakers' objective would not be so much to minimize durations in the program as to maximize the time recipients spend outside it (T^*). Within this new framework, analyzing durations would lead to a hazard function indicating the conditional probability of re-entering the program once the recipient has left it:

$$\lambda^*(t) = \lim_{dt \to 0} \frac{\Pr\left\{t < T^* \leq t + dt \mid T^* > t\right\}}{dt} \tag{2}$$

where the numerator represents the conditional probability of re-entering the program within the time interval (t, $t+dt$) and t represents the moment the first spell ends. The denominator reflects the off-welfare interval's length. The comparison of the hazards of participants and non-participants could help to obtain an accurate indicator of the welfare independence gains fostered by ICs.

3. THE IMI PROGRAM

3.1. *Institutional features of the IMI program*

The program analyzed in this study is the Madrid Regional Government's welfare program (IMI), which was set up in 1990. The reason for selecting a regional program is the completely decentralized nature of Social Assistance in Spain. This disparity causes the lack of homogeneous data on regional recipiency. The IMI is an 'average' program within the

[13] See Weeks (1991), Blank and Ruggles (1994), Brandon (1995), Cao (1996), Meyer and Cancian (1996), Harris (1996), Sandefur and Cook (1997), Keng *et al.* (2000) and Ayala and Rodríguez (2004).

complex set of regional schemes existing in Spain, which would allow some conclusions to be extrapolated to other regional programs. It also stands out nationally in the large scale 'insertion activities' are developed.

Potential claimants can apply for benefits only if they have used up entitlement to other income maintenance programs. Like other European systems, the main difference from U.S. programs is that IMI access is not only allowed to female lone-parent households, but also to couples without children, single individuals or male-headed families. Eligibility conditions are restricted to an upper age limit (65 years of age, at which age claimants can benefit from the national non-contributory pension scheme) and a lower age limit (25 years of age, except for claimants with dependent children). Another legal requirement is that of being officially registered in the Madrid region as a resident. This requirement is compatible with people of other nationalities claiming the benefit.

Benefits are considerably lower than in other European countries. Households receive income support insufficient to lift them over the poverty threshold[14]. Nominal benefits for single-person households were 300 euros in 2003. This amount is also far below the minimum wage. Additionally, real benefits decreased over the period studied. Most welfare programs in Spain tax 100% of other social benefits as well as earned incomes[15]. However, the IMI introduced some exceptions to encourage labor market participation, such as the compatibility of earnings and benefits during some months, or the decision not to consider specific means-tested benefits for elderly household members in determining household benefits. Benefits are granted for one year, automatically renewable.

The evolution of the program's caseload has been marked by the three-fold influence exerted by changes in macroeconomic conditions, reforms made to its main parameters and changes introduced to the national unemployment benefit system, the last safety net preceding the minimum income program[16].

Monitoring the flow of entries into and exits from the program is possible because of a wide base of administrative records. Cleaning these records allows us to have information

[14] Adequacy rates, defined as the ratio of benefits over poverty thresholds, are 57.8%, 37.6% and 35.1% for people living alone and couples with one and three children, respectively.
[15] A similar problem is found in the French *Revenu Minimum d'Insertion* (Gurgand and Margolis, 2005).
[16] Demographic shifts and institutional reforms had the greatest weight among all these factors (Ayala and Pérez, 2005).

on over 50,000 spells in the program, corresponding to slightly more than 39,200 households. Of these, 8,500 have left the program at some stage and then re-entered it at least once. Having administrative records available to study re-entries provides many advantages. These include very detailed and precise data, a larger number of observations and fewer biases than in surveys. Additionally, we have the complete history of the program since the beginning until 2001. To the extent that no previous welfare schemes were designed for this population, we avoid the usual left-censoring problems in the dynamic analyses of welfare.

The IMI database resulting from the cleaning of administrative data provides detailed information on each household's specific characteristics. These include some of the variables various studies have highlighted as ideal for analyzing welfare populations (Mainieri and Danziger (2001), Goerge and Joo Lee (2001)), such as the existence of structural problems (social isolation, alcohol abuse and drug addiction) or the development of behavior associated with marginal situations like prostitution or begging. As discussed above, there is a widespread concern that some of these groups face significant barriers to employment. They will need more human capital investments to move from welfare to self-sufficiency and work than other recipients.

A descriptive analysis of the IMI data allows us to give a preliminary assessment of the characteristics of recipients. Table 1 differentiates between the households that completed a spell in the program at some time between 1990 and 2001 and the households that are presently receiving benefits. The data on age show a larger presence of middle-aged individuals among household heads. Concerning the differences between completed and ongoing spells, the lower proportion of young people and the greater presence of individuals over 55 in the former stand out[17]. Frequencies of recipients' gender suggest that the program has been increasingly used by women. Regarding household size and type, small households stand out in general. People living alone make up a third of total households and have gained in relative weight over time. The presence of single-parent households is also striking. As expected, educational levels are low as shown by the huge percentage of recipients whose highest attainment is primary education. However, no straight inferences should be made regarding the possibilities for finding a job.

[17] This is because of the transfer of recipients to the national non-contributory pension scheme.

Employability frequencies reveal that a non-negligible segment of recipients could access employment now[18].

[TABLE 1]

A set of variables provides information on different social problems that accompany the lack of income. Five types of social problems stand out among IMI recipients[19]. The first is related to health problems, be they general health problems or those derived from the consumption of drugs and alcohol, as well as from mental illnesses. Another group constitutes social pathologies arising from insolvency in situations of debt, including non-payment for dwellings. A third problem involves belonging to an ethnic minority[20]. There also are some recipients suffering from severe mental health problems that limit their chances of becoming economically self-sufficient. A final problem is the development of behavior associated with social alienation, such as begging or prostitution, although these groups are not really relevant in quantitative terms.

3.2. *The Dynamics of the IMI program*

Available data allow us to make a preliminary approach to the dynamics of the program. One of the main strengths of the database is the length of the period that can be studied (135 months), longer than in most analyzes focused on recidivism and policy evaluation. This allows us partially to overcome the data constraints that have traditionally limited evaluation exercises of long-term reforms. The previously mentioned lack of left-censored information is important. We have data covering the whole history of the program with information for each recipient recorded twice a year.

Table 2 presents the estimated durations of completed and ongoing spells. In the case of spells that have ended, the data reveal a notable concentration of recipients in shorter time intervals. The ongoing spells show a profile that is relatively similar, although there are some differences. Though the percentages are higher in the first two intervals, the figures

[18] Employability is a variable defined by social workers the first time future clients apply for benefits. It takes the lowest level if there are no possibilities of working because of physical deficiencies and a maximum level if recipients could be already in the labour market.
[19] The variables on social problems are reported by the social workers from their observation of the recipients
[20] Belonging to an ethnic minority is not in itself a social problem. It is regarded as such in so far as belonging to an ethnic minority limits a person's possibilities of social integration. Most individuals classified into this group are Gypsies.

are lower than those of the first column, while just the opposite happens with longer-term spells. Durations are considerably lower than the ones estimated for other countries. Nevertheless, any inferences should be made with great care. On the one hand, the program has been in operation for a relatively short time, making it difficult to compare with programs that have been going on for a much longer time. On the other, the institutional characteristics of these programs differ considerably, particularly the aforementioned IMI low benefit levels.

[TABLE 2]

Previous studies have pointed out that belonging to an ethnic minority and employability are the main determining factors leading to lengthened spells, and parametric estimations of duration yield a certain degree of duration dependence (Ayala and Rodríguez, 2003). These results show that there are different kinds of recipients depending on their possibilities for entering the labor market. These need to be dealt with differently. If an important segment of households accesses the program temporarily, the best course of action for them is to ensure a basic level of income rather than paying out large sums for training purposes, because of the likelihood that they will leave the program in the short-term. For very different reasons, the same solution also seems to apply for people who are totally unfit for employment.

A second important issue in the analysis of the program's dynamics is the probability of recipients returning to it in the short and long-term. Recipients can be grouped into different categories according to the timing and duration of the spells in the program. We define as recidivist those recipients whose information appears more than once, including those censored at the moment data gathering was closed. Leavers are those who registered only one spell in the program that lasted less than 24 months. Finally, stayers are those who only had one spell in the program that lasted 24 months or more (this group may include censored recipients who have spent at least 24 months in the program). There would also be another group covering censored observations that cannot be classified as either recidivist or stayers.

[TABLE 3]

As can be observed in Table 3, the percentage of households that re-enters the program is somewhat more than a fifth of the total. The incidence of recidivism is also lower than the rates obtained in other countries. More than a third of the households that entered the IMI left it never to return, at least during the period of observation. A similar percentage of recipients had long-term spells and a large part of the program's spending was concentrated on this group. Previous research has also provided information on the IMI's recidivism determinants (Ayala and Rodríguez, 2004). According to its results, measures to maximize the duration of the off-welfare spells should focus on implementing reforms that would improve recipients' chances of leaving the program to enter into more stable forms of employment and allocating a greater amount of resources to promote the insertion of specific groups.

3.3. *'Insertion projects'*

A last set of comments refers to the 'insertion side' of the IMI. Among the different institutional features of the program the aforementioned 'insertion contracts' constitute its most prominent trait in a comparative framework. Once benefits have been approved by the program's managers recipients must sign an 'insertion contract' with the welfare agencies. Participation in 'insertion contracts' necessarily occurs while recipients are receiving IMI benefits. Initially, these contracts are intended to improve the recipients' self-sufficiency through an individualized design of 'insertion' measures adjusted both to individual and households' characteristics. The primary foundation is the idea of co-responsibility. Both social workers as well as recipients must deal with the primary goal of jointly searching the routes to welfare independence. Individual assessment is conducted when recipients enter the program and social services support is provided to help these households address specific and family challenges. The contents of the contracts are negotiated by both sides fixing a final plan of specific public intervention for each household[21].

Among the wide range of insertion strategies, a broad classification can be made breaking down the existing measures into two categories. The first set of measures includes overall actions developed to guarantee the basic pre-conditions of social participation. They

[21] Recent data shows that 51.4% of surveyed recipients declared that social workers usually dominate the negotiation process. Nevertheless, nearly two-thirds of the sample also believe these workers had a complete understanding of their specific problems.

consist of a variety of services comprising such different topics as general life skills, family stabilization, children's schooling, measures aimed to make it easier for some families to sustain their daily routines or helping recipients recognize their strengths. They try to achieve a balance between easing and accommodating barriers to employment and make the majority of ICs contents (Table 4)[22].

[TABLE 4]

A second set of measures specifically aim to improve the employment opportunities of recipients. Among these measures 'insertion projects' stand out as the most important public attempt at including human capital components in this welfare program. Under this category can be included a very diverse group of actions targeted at the improvement of the labor market opportunities of recipients. Annually the regional government funds projects in the areas of strengthening labor skills conducted by government agencies and non-profit associations. These entities work with a variety of targeted populations, including long-term unemployed, youth, homeless, lone parent households, ethnic minorities or convicted individuals. After an initial assessment of the recipients' employability levels social workers send potential participants to the current grantees. The latter decide whether or not recipients take part in these 'insertion projects'.

'Insertion projects' vary along a number of dimensions. They can be grouped into three classes, with recipients gradually moving from one service to other: widely targeted labor services, intensive training, and social enterprises. The common purpose of these actions is the achievement of basic labor skills and the establishment of a friendly work environment as necessary first steps in the transition to competitive employment. Social enterprises are relatively similar to some of the experiences embedded in the U.S. paid work experience programs[23]. Basically, they are program-operated businesses employing individuals who would otherwise be unemployed. Social support is provided primarily through on-site work supervision and prior intensive training. Sometimes these enterprises serve to provide a transition experience leading to more stable positions into the labor market in the long-

[22] Data from Table 4 are derived from welfare agencies' records. The numbers refer to all the actions developed by these agencies. Households can take part in more than one activity.
[23] See Pavetti and Strong (2001) for a detailed description of the type of social enterprises developed in the framework of welfare reforms in the U.S.

term. Nevertheless, some recipients see them as a final destiny, finding transition to competitive employment impossible.

In addition to the potential employment and self-sufficiency improvements, a strong point of these new tools is the link with local labor markets and the processes of endogenous growth. They also mainly focus on different social interest areas. Therefore, public intervention targeted at low-income households can give room for positive externalities. However, most of these economic activities can be characterized as labor-intensive while they are affected by low productivity levels. In practice, many of them have serious problems for achieving a minimal share in competitive markets. An additional drawback results from a potential practice of reserving some of these projects for the more skilled recipients among potential participants. While this risk of 'creaming' strategies is present in other welfare models [Barnow (1992), Anderson *et al.* (1993), Heckman *et al.* (2002)], the scarce empirical evidence available only shows a moderate incidence in the IMI case (Ayala *et al.*, 2004). A more visible pitfall is the low proportion of participant recipients. While all claimants must sign an insertion contract, only 6.5% take part in 'insertion projects'[24].

Available data on the participants' socioeconomic characteristics allow us to confirm or put into question some of the aforementioned limits. The average age of participants is lower than that observed both for ongoing recipients and those who completed a spell. This is a coherent result to the extent that income maintenance is the basic function of the program for the oldest cohort. There are no remarkable differences by gender and neither the type nor size of the household appears to be a discriminating factor for participation.

[FIGURE 1]

On the contrary, educational and employability levels stand out as the variables whose frequency distributions for participants and total recipients differ most widely. The percentages corresponding to the lowest educational levels (do not read or write and no academic qualifications) are clearly small among participants. Especially striking are differences concerning employability data. Figure 1 plots the corresponding frequencies for completed spells, ongoing spells, and participants in 'insertion projects'. The proportion of

[24] This number does not coincide with Table 4 results. The reason is that we consider here the complete history of the program. The database for all recipients includes 2,070 participants in 'insertion projects' and 29,422 'non-participants'.

recipients totally unfit for normal work or needing an intense process of social or health recuperation is clearly lower in the participants' case. In a certain sense, this is also a foreseeable result since insertion actions for households affected by these problems should focus on acquiring a basic level of life skills. However, this does not help the data avoid potential selectivity biases causing potential problems for causal evaluation of the projects' effectiveness. Fortunately, the richness and quality of the data will allow us to take into account non-random participation by means of appropriate matching estimators.

4. A CAUSAL EVALUATION OF ICs

4.1. *Evaluation approach*

As discussed above, ICs evaluation may be implemented taking welfare independence indicators as possible outcomes. Two key outcomes are the probability of returning to the program (recidivism rates) and the duration of the off-welfare spells for those recipients participating in 'insertion projects'. In the framework of the human capital model reviewed in previous sections, whether these participants also show higher durations in the first spell into welfare can also be tested.

The question of which are the major outcomes in terms of independence or economic self-sufficiency leads us to choose a particular method of evaluation. We consider the results of participation in 'insertion projects' as the treatment effect. The primary treatment effect we analyze is the expected treatment effect for the treated population:

$$\tau = E(Y_1 - Y_0|\mathrm{D}=1) = E(Y_1|\mathrm{D}=1) - E(Y_0|\mathrm{D}=1) \qquad (3)$$

where Y_1 denotes the outcome for individuals engaged in 'insertion projects', Y_0 denotes the outcome if these individuals were not exposed to the treatment, and $D_i \in \{0,1\}$ is an indicator of this participation.

As pointed out before, participation in 'insertion projects' is not completely random. A counterfactual is needed to estimate $E(Y_0|\mathrm{D}=1)$, the outcome participants would have experienced on average had they not participated. The past decade has witnessed an explosion of welfare evaluations using matching econometric estimators that can partially

solve the problem. A literature based on direct comparisons of experimental and non-experimental findings has shown the strengths and limits of non-experimental causal studies[25]. Matching methods have been highlighted as producing valid estimates of program impacts.

The fundamental basis of matching evaluation is to re-establish experimental conditions when no such data are available. It is possible to build up a sample counterpart by pairing each participant in 'insertion projects' with non-participant recipients. A necessary assumption is conditional independence between non-treated outcomes and program participation (Rubin, 1977). We can select from the non-participants a control group in which the distribution of observed variables is as similar as possible to the distribution in the participants group. This requires:

$$0 < Pr\,(D{=}1|\,X{=}x) < 1 \qquad \text{for } x \in \widetilde{X} \tag{4}$$

and guarantees that all treated recipients have a counterpart in the non-treated group[26].

The limitation for matching is that it relies on a sufficiently rich comparison group. As the number of observable covariates increases, there are growing problems for finding exact matches for each of the treated units. Rosenbaum and Rubin (1983) suggested the use of the probability of receiving treatment conditional on covariates (propensity score) to reduce the dimensionality of the matching problem. If the propensity score is known the average effect of treatment on the treated (ATT) can be estimated as:

$$\tau = E\{E\{Y_1|\mathrm{D}{=}1, p(X)\} - E\{Y_0|\mathrm{D}{=}0, p(X)\ |\mathrm{D}{=}1\}\} \tag{5}$$

where $p(X)$ is the propensity score. To derive (5) from (3) requires an adequate balancing of pre-treatment variables. If this balancing hypothesis is satisfied, observations with the same propensity score must have the same distribution of observable characteristics

[25] The seminal contribution of LaLonde (1986) gave rise to an abundant literature comparing the effects on trainee earnings of an employment program run as a field experiment with the estimates that econometric methods without experimental data might have produced. Dehejia and Wahba (1999, 2002), and Smith and Todd (2004) use the same data from the National Supported Work Demonstration to test propensity score matching estimators.

[26] These assumptions have been widely justified in different studies. See Rubin (1977), Rosenbaum and Rubin (1983), Angrist *et al.* (1996), Smith (2000), Becker and Ichino (2002), and Frolich (2004).

independently of treatment status. This means a random exposure to treatment and control, and treated units should be on average observationally identical.

As Dehejia and Wahba suggest (1999) propensity score methods can be more effective than parametric models in controlling for observed differences in the evaluation of employment and training programs. Nevertheless, their drawbacks have also been outlined by different authors[27]. It may be the case that the matching process leads to a considerable loss of observations and that the more detailed the information is, the harder it is to find a similar control.

We use propensity score matching to evaluate the outcomes of the participation in 'insertion projects'. First, to estimate the score, we estimated a probit model with the covariates predicting participation in 'insertion projects':

$$Pr\{D=1 \mid X\} = \Phi\{h(X)\} \tag{6}$$

where $h(X)$ is a starting specification that includes all the covariates as linear terms. Fourteen covariates were included in the initial specification: the household head's age, employability, number of social problems, educational level, household size, number of children, and different dummy variables indicating the recipient's gender, whether it is a lone-parent household, an individual living alone or belonging to an ethnic minority, mental health problems, prostitution, non-payment for dwellings and drug consumption.

Data were sorted according to estimated propensity score, ranking from lowest to highest, in order to define a valid comparison group for treated individuals. The next step was to create subclasses with similar propensity scores. The subclasses (quintiles) were checked until balance was achieved with a final region of common support including 18,756 cases. Different weighting procedures were selected for associating the set of non-treated observations with treated units. In order to find a weighted average of the outcomes of more non-treated recipients, we opted for smoothed weighted matching estimators. More precisely, we use kernel matching estimators. To test the sensibility of the ATT to the chosen estimators we also used a nearest-neighbor matching estimator, and a caliper matching estimator.

[27] See Blundell (2000), Smith and Todd (2004), and Imbens (2004).

4.2. *Empirical findings*

Estimates of the effects of 'insertion projects' on the recipients' economic self-sufficiency by using propensity score estimators are only reliable if the matching produces a credible control group. Figure 2 plots the diagram of the propensity scores for the IMI records. The horizontal axis displays the cumulative units from lowest to highest propensity scores and the vertical axis shows the propensity scores of the treated and control units. The solid and dashed lines largely coincide. The matching is especially high in those units with the highest propensity score.

[FIGURE 2]

If the matching works, as the previous analysis shows, the availability of matched observations allows the comparison between the outcomes of treated and control units. As discussed above, three possible outcomes can be tested. First, we test if treated recipients spend more time in the programs, in line with the assumptions of the human capital welfare models. Second, two indicators of success are used for the assessment of the effectiveness of 'insertion projects': the differential effects on recidivism rates, and survival times outside the program for recidivist recipients. For all these questions, it is interesting to test also to what extent propensity score estimators contribute to reduce possible biases arising from non-random participation.

Turning to the first question, a reasonable hypothesis can be made that participants in 'insertion projects' need longer initial spells to achieve higher levels of human capital[28]. We can compare the survival times of the first welfare spell or, alternatively, the conditional probability of leaving the program of treated and control units. An intuitive way of estimating the probability function of leaving the IMI resides in using non-parametric methods like the Kaplan–Meier estimator. Recipients may leave the program in different periods, $t_1 < t_2 < ... < t_k$. In each period t_j, there are n_j households that remain in the program and d_j households that leave it. The Kaplan–Meier (KM) estimator is defined as follows:

[28] It must be noted again that participation in 'insertion activities' occurs while recipients receive benefits.

$$\hat{S}(t) = \prod_{j|t_j \leq t} \left(\frac{n_j - d_j}{n_j} \right) \tag{7}$$

In order to represent the program's hazard functions resulting from the application of the estimator, we chose to apply a kernel smoothing procedure. The algorithm put forward by Ramlau-Hansen (1983) was used because of its properties to estimate hazard functions[29]. It must be noted that we are just comparing the raw outcomes between the two groups. Once propensity score matching gives rise to a viable control group, differences in the hazards' shape provide an idea of the effects of participation in 'insertion projects' on the length of the first IMI spell.

[FIGURE 3]

Figure 3 depicts the hazard ratios of the first spell in the program both for participants and non-participants –using original data– and treated and controls. Although there is no reason to expect the first estimates to produce accurate results, they represent the estimates one would obtain if one were to ignore the problem of non-random participation. An examination of the hazards both with original data and matched units yield two important conclusions. First, the propensity score estimators appear to reduce the effects of non-random participation in the expected direction. Differences in the hazards' shapes are smoother in the matching case. Second, in keeping with the theoretical arguments set out above, controls unequivocally show higher hazard rates than treated units. The reason for this is that pre-competitive employment and intensive training activities require long participation spells. It appears that recipients taking part in 'insertion projects' assign at present a net positive value to these initiatives of welfare designers.

Figure 3.b also shows that while the treated units' hazard rate is well below the controls', there are markedly different profiles. While the hazard rate for controls decreases monotonically with time, the hazard function for treated units shows a trend change. This last result also appears in line with the idea of possible transitions to the labor market once the participants have spent enough time in an 'accessible work environment'. In any case, the results also show that the required length for achieving enough levels of labor skills

[29] The filter is defined as $\tilde{\lambda}(t) = \frac{1}{b}\int_0^1 K\left(\frac{t-s}{b}\right) d\tilde{\beta}(s)$, when $b>0$.

could be too long for some recipients. If the treatment is to have a chance to be cost effective participants should have to stay out longer after the initial spell.

The central hypothesis to be tested is whether participation in 'insertion projects' increases economic independence. Promoting labor skills is one of the primary rationales for these 'insertion projects'. Intensive training and pre-competitive employment should reduce future welfare dependency. As was set out above, the most basic independence measure results from comparing the recidivism rates of recipients participating in 'insertion projects' with the rates of recipients who do not. The higher the effectiveness of these measures, the lower the probability of returning to the program.

If the problem of non-random participation is not taken into account a basic estimate of the effects of 'insertion projects' on recidivism could be made by using a standard regression. Table 5 shows the results of a logistic regression model for the probability of returning to IMI. It includes participation in 'insertion projects' among the covariates potentially associated with higher recidivism rates. As expected, 'insertion projects' reduce the probability of future dependence on Public Assistance for IMI leavers. The effects of the other covariates are also well defined and showing the expected signs, except the number of social problems.

[TABLE 5]

As stated before, the estimated effect of 'insertion projects' on the probability of returning to the program could be affected by the problem of selection bias. As participants' employability levels and educational attainment are relatively higher, the probability of welfare recidivism lowers. In this sense, the propensity score matching approach should provide a correct identification of differences in outcomes. For instance, a basic odds-ratio estimate considering the relative risk of recidivism yields larger effects for 'insertion projects' due to the non-random selectivity (a ratio of 0.77 for the primary data on participants and non-participants and a ratio of 0.96 in the case of treated and control units).

[TABLE 6]

As a credible control group can be used, a clearer picture of the impact of 'insertion projects' can be obtained trough the estimated average effect on the treated. We can directly compare the raw outcomes of treated and control units. The estimated ATT and associated standard errors appear in Table 6. Most of the matching algorithms yield similar results. On a substantive level, our estimates of the 'insertion projects' effects on recidivism show an unambiguous result: recidivism is considerably lower in treated households. Therefore, results give general support to the notion that 'insertion projects' contribute to promote the participants' self-sufficiency. The probability of future welfare usage decreases in a range of 22.7–24.1%. This evidence suggests that ICs have made low-income households less dependent on government and more self-sufficient due to the development of intensive training and friendly labor environments. It appears that some of these recipients have received satisfactory targeted skills upgrading and have obtained adequate initial jobs for sustaining employment over time.

These results are in keeping with the empirical evidence for other countries, like the U.S., where employment targets were introduced to promote self-sufficiency[30]. However, most of the IMI leavers are employed in low-wage jobs. We should expect that, in the medium or long term, some welfare leavers will lose their jobs or be affected by limited upward mobility. On one hand, working steadily, even during short time periods, could improve future employment opportunities. On the other hand, a probably large slice of leavers will again demand welfare benefits. Therefore, a second-best public objective could be lengthening, as much as possible, survival times outside the program.

A precise estimation of durations of the recidivist recipients' off-program spells may help to clarify the overall effects of the projects. More precisely, the key issue is the time period comprised between the moment recipients left welfare after an initial spell and the date of returning to IMI. The main difference with the previous analysis is the emphasis on the length of this spell instead of the probability of recidivism. We focus now on recidivist households, under the assumption that participants should show longer off-program spells.

Figure 4 shows recidivism hazard rates both for participants and non-participants and treated and controls. These hazards represent the conditional probability of returning to

[30] In the U.S., there was a sharp decease in welfare recidivism after the mid-nineties reform. According to Carrington *et al.* (2002), leavers in the later half of the nineties were much less likely to return to welfare than leavers in the early part of that decade.

welfare, giving that the recipient has exited from the program. We compare again the raw outcomes between the two groups. Differences in the hazards should provide an idea of how participation in 'insertion projects' lengthens the time IMI recipients spend outside the program before returning to it. We also use here the Kaplan–Meier estimator and an optimal kernel smoothing.

[FIGURE 4]

Results show two important conclusions. First, the different profile of the hazard when selectivity bias is taken into account gives general support to the notion that the propensity score-matching results appear to reduce the magnitude of the treatment effect. Despite the hazards' shapes show similar general patterns, propensity score estimates seem to slightly reduce the distances between the re-entry functions. Second, once the problem of non-random participation has been corrected, we find striking differences in the profiles of control and treated units. Both curves moderately grow until reaching 50 months outside the program, and profoundly diverge thereafter. The conditional probability of coming back to the program is systematically higher in the case of controls.

In short, both lower recidivism rates and longer off-program spells indicate that 'insertion projects' are helping to foster self-sufficiency and welfare independence. These positive results in the selected success indicators must be jointly considered with the already quoted improvement in the performance of the social service centers and the greater involvement of non-profit organizations in the development of these projects. All these features allow us to assess the value of these welfare tools as highly positive. There are even enough grounds to characterize the IMI program as cost effective. Higher costs due to longer initial spells could be offset by lower recidivism rates and longer off-welfare survival times. However, our data does not allow us to make a formal cost-benefit analysis[31].

Nevertheless, all these conclusions must be interpreted cautiously. In addition to the inherent drawbacks of matching methods, there are two additional caveats to these results. First, attention is focused on mean impacts. Average effects may mask the diverse experience of welfare recipients participating in 'insertion projects'. New data and further

[31] Space constraints prohibit us from covering all the difficulties in developing a complete framework of benefits and costs emerging from these programs. For a comprehensive summary of this topic see the excellent review by Friedlander *et al.* (1997).

research are needed for a more complete picture of heterogeneity across recipients in the sign and magnitude of the estimated effects[32]. Second, there is also a certain heterogeneity in the very notion of 'insertion projects'. Theoretically, the foreseeable effects of general training are different from those corresponding to participation in social enterprises. If more accurate data were available, the standard model of only two states should be extended to the case of multiple states[33].

5. CONCLUSION

Since the late 1980s most South European countries have put into practice new social devices reconciling the two-fold purpose of providing a basic level of income and carrying out measures to favor the labor market participation of low-income households. The key element of these changes is the institutionalization of 'insertion contracts' for welfare recipients. These contracts can be considered as a public attempt at a more intensive human capital component in welfare programs. As a result, higher utility gains from the programs can be derived by recipients while positive externalities could contribute to higher levels of social well-being.

In this paper, a specific experience of 'insertion contracts' has been analyzed. Madrid's IMI provides considerable advantages for an adequate evaluation of welfare-to-work programs. Longitudinal data are considerably longer than those used in other studies and can serve to take into account the long-term effects of human capital designs. They also include very detailed and precise information, and a larger number of observations and fewer biases than other sources. These data have been used to answer two fundamental questions: to what extent do 'insertion projects' contribute to reduce recidivism rates, and are there substantial differences between survival times outside the program for treated and non-treated households? Propensity score-matching estimators were used to re-establish experimental conditions.

From the methodological side, our results suggest that the propensity score estimates appear to reduce selectivity due to non-random participation and that a variety of estimators produce quite similar 'insertion projects' effects. The paper tests the extent to

[32] Some studies consider this heterogeneity in the evaluation of U.S. welfare reforms. See Bitler *et al.* (2003).
[33] Imbens (2000) and Lechner (2002) have handled the issue of treatment heterogeneity in evaluation on the basis of propensity score matching.

which the results are sensitive to alternative estimators, finding very comparable results. From the empirical side, both recidivism rates as well as the duration of off-welfare spells suggest successful interventions. Recidivism is considerably lower in treated households giving general support to the notion that 'insertion projects' contribute to promote the participants' self-sufficiency. Additionally, the estimated hazard for recidivist recipients of the conditional probability of coming back to the program is systematically higher in the case of controls. Unequivocally, the empirical evidence suggests that these public instruments have made low-income households less dependent on government and more self-sufficient because of the development of intensive training and the setting of a friendly labor environment. We could even expect that the program is cost effective. Therefore, if recidivism is a serious problem limiting the effectiveness of welfare programs, the coherent design of 'insertion projects' could serve as an appropriate strategy for improving their results. In the IMI case, there is still a large margin to take advantage of these potential gains, as the number of participants in 'insertion projects' is small.

However, there is a need for research to provide a more complete picture of the strengths and limits of this type of welfare development. Two major research lines promising new insights about the effectiveness of 'insertion contracts' might entail, firstly, a deeper analysis of the heterogeneity across recipients in the estimated effects, and secondly, investigation of the heterogeneity in the measures grouped under the notion of 'insertion projects'. As new data are available, a more detailed analysis could help to clarify some of the estimated effects.

Bearing these caveats in mind, our results contribute to including the 'Latin model' in the range of welfare reforms available for implementing consistent strategies trying to obtain higher employment rates and self-sufficiency of welfare recipients. Depending, logically, on national singularities and constraints, these results could be encouraging for the assessment of other regions and countries.

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Table 1
Socio-Economic Characteristics of IMI Recipients
(*frequency distribution*)

	Completed spells, 1990-2001	*Ongoing spells, 2001*
AGE		
<26	6.7	11.4
26–35	30.9	29.5
36–45	28.7	26.5
46–55	18.0	19.6
56–65	15.7	12.9
GENDER		
Male	40.3	34.2
Female	59.7	65.6
HOUSEHOLD SIZE		
1 person	25.8	33.4
2 people	20.6	21.1
3 people	20.2	18.6
4 people	15.5	12.1
5 people	8.9	7.6
6 people	4.7	3.9
7 people	2.2	1.9
8 or more people	2.0	1.3
HOUSEHOLD TYPE		
Single person	25.8	33.4
Lone-parent household	31.6	37.6
Other households with children	20.1	12.0
Other households without children	22.5	17.0
EDUCATION		
Does not read or write	10.3	13.6
No academic qualifications (only reads and writes)	20.6	21.6
Primary Education	36.7	35.5
Middle School Education	18.1	15.8
Secondary Education	6.6	6.6
Level 1 Vocational Training	2.9	2.3
Level 2 Vocational Training	1.7	1.4
University Degree	1.3	1.3
Post-Graduate Degree	1.5	1.8
LABOUR FORCE STATUS		
Employed	18.0	13.5
Unemployed	59.1	69.0
Inactive	22.9	17.5
EMPLOYABILITY		
Totally unfit for normal work	9.6	8.0
Needs process of social / health recuperation	23.8	37.3
Unemployed needing training / education	21.1	25.4
Could access employment now	32.4	21.3
Does work on hidden economy or equivalent activity	8.3	7.0
Does normal work or equivalent activity	4.8	1.1

Table 1 (continued)

SOCIAL PROBLEMS[1]		
Drug abuse	5.0	6.0
Alcohol abuse	4.8	4.7
Other mental health problems	8.8	10.9
Other serious health problems	14.9	18.1
Non-payment of dwelling	6.3	7.0
Debt accumulation	9.7	9.4
Beggary	0.8	1.2
Prostitution	0.4	0.7
Social isolation	10.8	15.9
Ethnic minority	11.7	23.2
Number of observations	(41,996)	(7,568)

[1]The categories appearing in social problems are non-excluding dummy variables. A household can therefore suffer from more than one problem. The figures show percentages of recipients affected by each problem.

Table 2
Distribution of Spells

	Completed spells 1990-2001	*Ongoing spells 2001*
< 1 year	6.1	16.6
1 to 2 years	60.8	37.5
3 to 4 years	16.2	13.0
5 to 6 years	8.6	11.3
7 to 8 years	3.9	6.9
9 to 10 years	2.0	5.6
> 10 years	2.3	9.3
TOTAL	100.0	100.0
(Number of observations)	(41,996)	(7,568)

Table 3
Types of Recipients

Type of Recipient	Frequency	Percent
Stayers	14725	37.5
Leavers	13868	35.3
Recidivist	8517	21.7
Others	2128	5.4
TOTAL	39238	100.0

Stayers: recipients who only had one spell in the program that lasted 24 months or more
Leavers: recipients who only had one spell in the program that lasted less than 24 months
Recidivist: recipients with more than one spell

Table 4
Total number of ICs treatments (2002)[a]

	Percent
Life skills	*64.7*
Specific childcare	7.4
General social skills	7.1
Adults' schooling	5.3
Children's schooling	9.1
Specific housing actions	5.1
Specific medical assistance	6.5
Daily routines	2.5
Supportive counseling	16.5
Others	5.2
Labor skills	*35.3*
Basic training	17.8
Job assistance	7.9
Insertion projects	9.6
TOTAL	100.0

[a] Households can take part in more than one activity.

Table 5
Probability of Recidivism

	$\hat{\beta}$	Standard error
Constant	0.386***	0.071
Participation in 'insertion projects'		
Yes	-0.087**	0.038
Educational Attainment		
Does not write or read	0.610***	0.060
Primary	0.402***	0.043
Secondary	-0.011***	0.035
Higher	-0.307***	0.039
Belonging to an Ethnic Minority		
Yes	0.494***	0.034
Household Size		
1	-0.192**	0.060
2-4	-0.177***	0.048
5-7	0.096*	0.052
Number of Children		
1	-0.066	0.066
2-4	-0.126**	0.061
5-7	0.068	0.054
Number of Social Problems		
1	-0.032	0.043
2	0.024	0.051
3	0.062	0.076
≥ 4	0.100	0.124
Single-Parent Household		
Yes	0.050*	0.030
Employability		
Low	0.229***	0.037
Medium	0.312***	0.042
High	-0.100**	0.034
AIC	17656	
-2 Log L	17654	
N	24513	

Standard errors in brackets. ***Significant at 99%, **Significant at 95%, *Significant at 90%.

Table 6
Effects of 'insertion projects' on the recidivism rate (ATT)

	ATT	N. Treated	N. Controls	Standard Error
Kernel Matching Estimator	–0.227	1289	17467	-
Nearest Neighbor Matching Estimator	–0.241	1289	13596	0.036
Caliper Matching Estimator	–0.240	1289	13596	0.036

Figure 1
Frequency Distribution of Participants in 'Insertion Projects'
(Employability Levels)

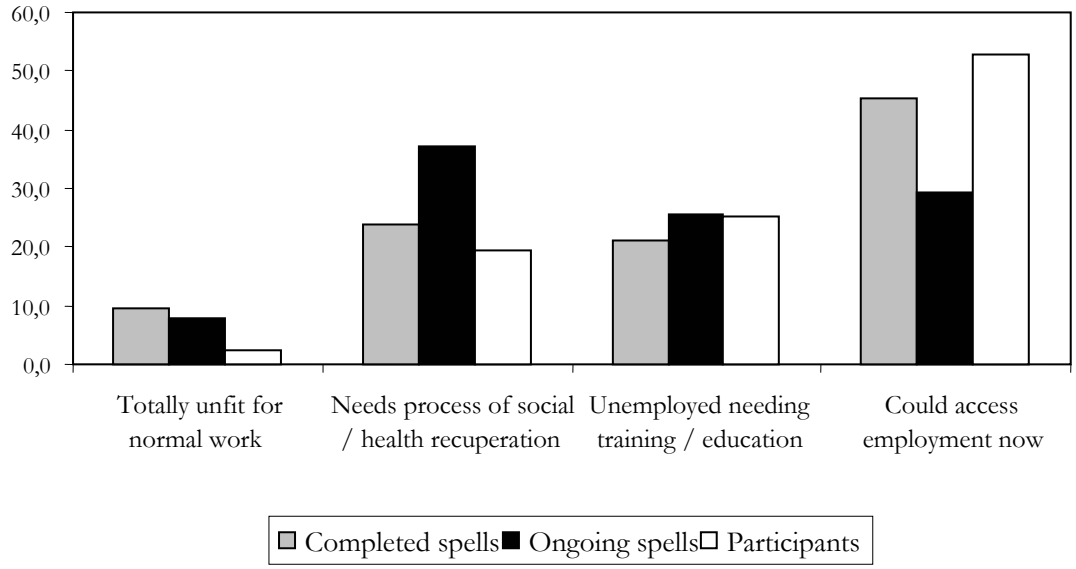


Figure 2
Propensity Score for Treated and Matched Comparison Units

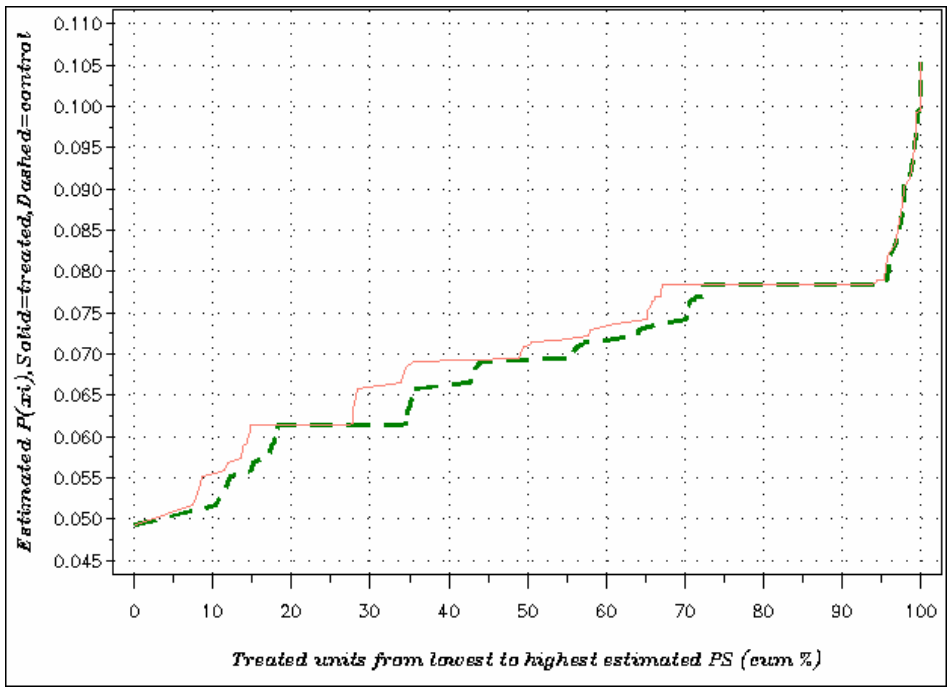
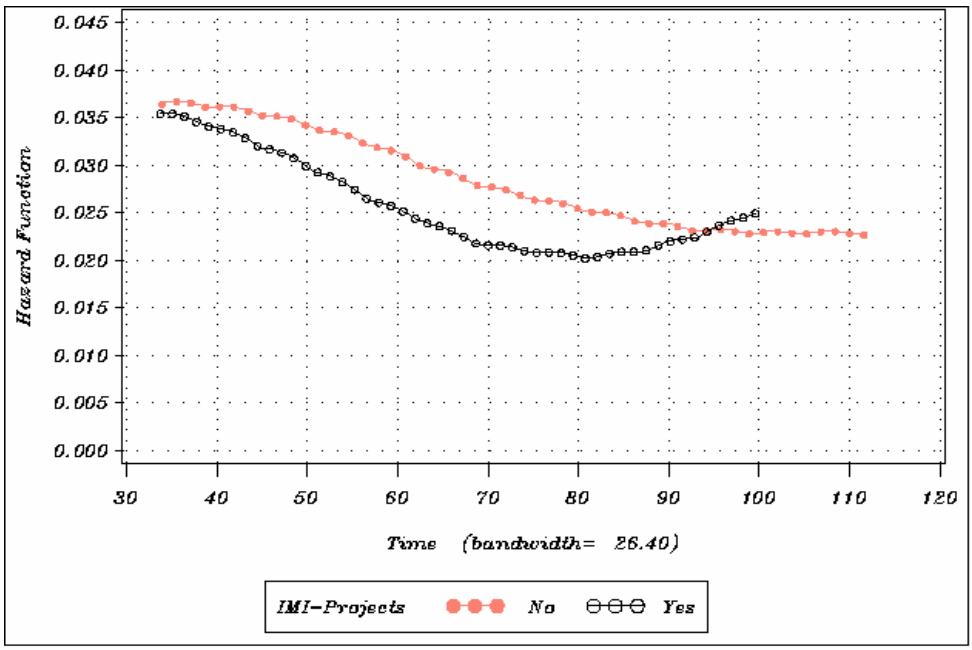


Figure 3
Exit hazard function (first spell)

a) Participants and non-participants (original data)



b) Controls and treated units (PS estimators)

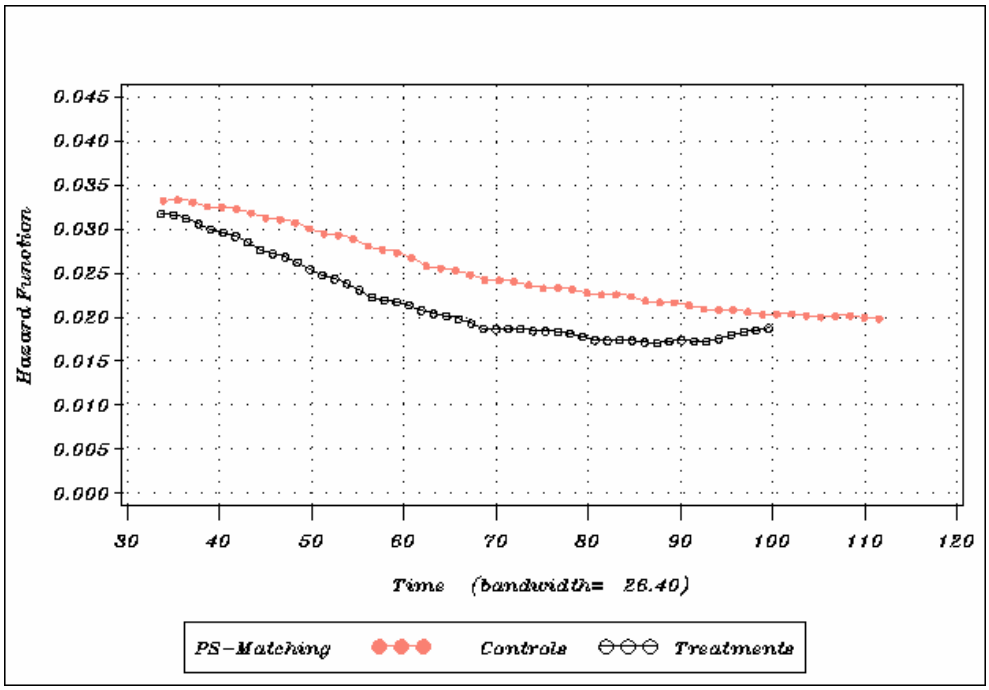
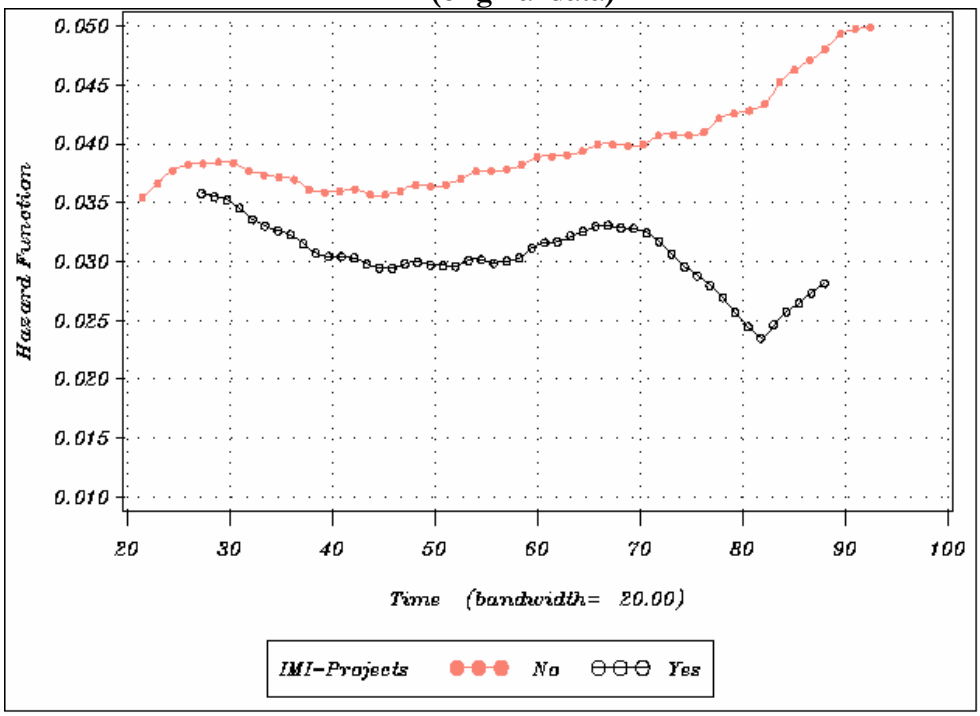


Figure 4
Re-entry Hazard Function

a) Participants and non-participants (original data)



b) Controls and treated units (PS estimators)