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PROPOSTA PER SESSIONE 1: QUALITA' DEL LAVORO

**“The transitions of temporary help workers in the labour market:
is training relevant?”**

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Extended abstract

The aim of this paper is to investigate the determinants of temporary agency workers' transitions in the labour market, paying specific attention to both the role of training among the influencing factors and the existence of state dependence. To this end we explicitly model the impact of training and of temporary help employment spells on the probability of transition to different status in the labour market (permanent employment, fixed term contracts, unemployment or inactivity, continuing education) on the basis of a competing risk hazard model.

The main research hypotheses on the relevance of training are that, on the one side, education, vocational training and on the job experience may be partly substitute (Topel, 1991); on the other side, the more educated workers are also more likely to get more training (both on the job and vocational training) (De Grip et al.,1996). Since usually temporary workers receive less training than permanent workers, it is interesting to assess if the net effect of training is relevant to improve the transitions probability towards permanent employment.

The analysis of the relevance of training, and specifically training directly supplied by the temporary help agencies (TWA), in determining the transitions in the labour market of temporary workers has relevant policy implications, especially for Italy, where the use of training funds for temporary workers is now under discussion. The results of this study may also provide some insight on the actual role of training in improving employment transitions of temporary workers, with respect to other sources of human capital and skills accumulation, such as work experience. Furthermore, it should be possible to detect what type of training

(e.g., formal classes or on the job training) is eventually more significant in affecting transitions to stable employment.

The present study is based on an ad hoc survey on a sample of 2300 individuals who were hired on a temporary help contract in 2001 in Emilia-Romagna¹. The survey has gathered information on socio-demographic characteristics of the individuals, their labour market status both before and after the temporary work experience, the temporary job(s) characteristics, counselling and training received (distinguishing training as a temporary worker from other types of training).

The analysis has been carried out using a competing risk duration model, considering four different exit states (permanent employment, other fixed terms employment, unemployment or inactivity, student). The temporary work spells have been calculated thanks to the availability of longitudinal data on labour market status over three years.

The initial results show that the duration of temporary agency work and training are relevant determinants of the transition probabilities to different status. The state dependence relation between the cumulative spell of the temporary agency work status and the probability of transition seems valid on the short run: the probability to move toward permanent employment increases in the first six months of interim work, to decline afterwards as the duration of the interim spell increases. When the non continuous specification of the duration spell is used, spells over 12 months have no impact on the probability of transitions. The type of training considered has different impacts on transitions: the training provided by temporary work agencies appears to reduce the probability for individuals to move toward other forms of employment. On the contrary, other forms of training increase the probability to exit temporary work. The probability to exit to permanent jobs is also positively affected by having been employed in a stable job before the temporary work experience.

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Sessione I: Qualità del lavoro

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1. Introduction

This paper investigates the determinants of the transitions in the labour market of temporary agency workers.

The temporary agency work is an emerging phenomenon in the Italian context as it has been introduced only in 1997. However temporary agency work has dramatically increased since then and it is likely to experience a further evolution due to changes in the Italian legislation occurred in 2003 (law n. 30/2003)².

The empirical evidence at the European level underlines a significant growth of the temporary agency work sector and of the number of individuals involved. It has been estimated that in Europe this sector has involved over than 2 millions of workers in 1999. However the share of temporary agency workers over total employment is still low, ranging from 0.2% in Italy and Greece to 4% in The Netherlands.

The temporary agency work has some peculiarities due to the fact that three different actors, with different strategies and goals, are involved: temporary help agencies, workers and companies.

The present study is focussed on labour supply and in specific on the analysis of the role of temporary agency work and related training in improving the labour market performance of individuals. In fact temporary help agencies are largely involved in the training of temporary agency workers, also managing directly companies that organize courses. Moreover agencies are asked by the law 196/1997 (art. 5) to support financially a specific fund dedicated to finance training for temporary help workers.

The study is structured as follow: firstly it is sketched the Italian institutional setting and its impact on the labour market performance of temporary agency workers; than it is presented an overview of the empirical literature related to the mobility of temporary agency workers on the labour market; in section 4 the econometric model is presented and in section 5 we discuss the data used; finally in section 6 the main descriptive and econometric results are presented. The last section concludes.

2. The institutional setting: the relevance of training for temporary workers

One of the main aim of this paper is to investigate the impact of training in determining the transitions of temporary agency workers to others states in the labour market. More specifically, it is considered the role of training provided during the temporary work experience by temporary help agencies (TWA) and the role of other forms of training not linked to the temporary work experience.

² The law 30/2003 allows temporary work agencies to extend their area of intervention: they will be able to provide both permanent and temporary jobs, to develop research; to do human resources selection and to support the re-qualification of workers.

The relevance attributed to training for temporary agency workers deals with the linking function that the training should perform among different missions of temporary workers in order to give continuity to the kind of activity performed by workers in terms of skills and competencies required.

In general in Italy there is little investment in formal training activities for temporary agency workers both by agencies and using companies.

On the other side, temporary work itself could be useful for human capital accumulation of these workers. There is in fact evidence of the role of agencies as a key point of relational networks leading workers to accumulate a greater level of knowledge, competencies and experiences that could increase their working opportunities on the labour market. In these ways agencies provide a sort of "indirect" on the job training for temporary workers.

Training is actually a relevant issue for all the three actors involved in the temporary agency work relationship (EIRO, 2002):

- ✓ training, and especially continuing training, is useful for temporary agency workers, since they usually perform a high number of short missions and could also experiment unemployment spells, thus increasing the need to improve their skills in order to achieve stable employment;
- ✓ temporary help agencies may not be induced to invest in training given that these workers could be easily hired by client companies or by other agencies once they are well skilled. There is hence a need for agencies to have a return from the training investment that is however compulsory in some countries. Another critical point is related to the fact that agencies should avoid to provide specific training because workers should be ready to work in different working contexts, to be flexible and mainly with a general training;
- ✓ using companies may see the provision of training to temporary workers as a pure economic cost because of the little period they remain employed. Moreover the nature of temporary work should provide companies with workers immediately ready to work. Using companies may provide training to temporary workers when they need to gain a better knowledge of the worker abilities in order to employ them permanently.

There are then some critical implications related to the provision of training to temporary workers and some different solutions. In the European context different solutions are applied and training is funded either by the worker, or by using companies, or by temporary help agencies or by the State or other institutional organizations.

In Italy the law 196/1997 (art. 5) has specifically established the creation of a fund, Forma.Temp, to finance training for temporary agency workers. This fund receives financial resources from agencies equal to 4% of the gross wage of temporary workers and has the specific goal to provide training for temporary workers in the ways established jointly by companies, agencies and training providers.

The fund has become operative only in 2002 through the formulation of a Vademecum (training for temporary agency workers guide) indicating the type of training that could be financed: basic training, professional training, on the job training and continuing training. Since 2002 there have also been some important agreements between the social partners on the implementation of law 196/1997, by which training activities should be directed in particular to the long term unemployed, the disabled, immigrants and women re-entering in the labour market.

Nevertheless the monitoring system has outlined that the fund has not been completely functioning so far: there has been a delay in spending the financial resources mainly due to juridical concern, to some difficult relationship among trade unions and to the relatively long time required for the approval of the training projects compared to the urgent necessities about the entry of workers in companies. The modest activity of the fund has been related also to the fact that so far agencies preferred to provide training internally through short basic classes, provided by ad hoc training companies created by temporary help agencies themselves. Training provided by agencies is usually tailored on the basis of companies needs and is then mostly professional and basic training. It appears more difficult to organize continuing training courses because, as indicated in the Vademecum (training for temporary agency workers guide) they can be provided only to people with at least 4 months experience in temporary work and to people that have already attended two other classes financed by Forma.Temp.

In Italy so far training activities for temporary agency workers were provided equally to men and women; more to people with secondary school (58% of the total temporary agency workers that have attended training classes) than to those with tertiary education (13%).

3. Literature review

The empirical literature on temporary agency workers has been often addressed to study the impact of this form of employment on the probability for individuals to transit to other status on the labour market and in particular to transit to stable employment.

The economic theory considers two positive impacts of temporary agency work on the opportunity for individuals to find a permanent employment:

- ✓ a *direct effect* allowing the more productive workers to be known by the company;
- ✓ an *indirect effect* linked to the opportunity to increase the human capital accumulation, to enlarge the social networks and to get information on vacancies in the company.

On the other hand some possible negative impacts could be:

- ✓ a *negative signal* linked to the availability to accept a temporary work that could hide possible difficulties in entering the primary labour market;

✓ a *disincentive* for the company to pay for the specific human capital accumulation of these workers due to their high level of turnover.

In an overall analysis of the transitions from temporary agency work to permanent work it is important to consider also the motivation of the company to employ permanently a temporary agency worker.

The empirical evidence underlines that companies use temporary agency workers more to assure organizational flexibility and less to test the worker. How these different reasons prevail or not depends also on the institutional context. The overall effect of the company motivations on the probability for the worker to obtain a stable employment is then difficult to forecast.

Many recent empirical studies evaluated if the temporary agency work experience facilitates the entry in the labour market, leading the individual to stable employment³. A general result underlines that the labour mobility of these workers towards a permanent job is quite different in the various countries ranging from 21% in France to 56% in Austria. However temporary agency workers show almost everywhere greater probability to transit to unemployment than to reach a stable employment (7-24% on average, against 1-5%).

In Italy Ichino, Mealli, and Nannicini (2003) evaluated the impact of temporary help work on the transition probability to stable employment for temporary help agency workers. The study shows, referring to people between 18 and 40 years old, non permanent workers living in Tuscany and Sicily, that temporary help work significantly increases the probability to get a stable employment one and half year later (28%, against 14% without temporary work experience). A similar improvement is evident with other forms of temporary work.

Another Italian research shows that the probability to transit from a temporary agency work to a stable employment is maximum for medium durations of the temporary agency missions. A duration long enough to allow the company to test worker's productivity. but not too long to become too costly with respect to other kinds of employment contract (Montanino and Sestito, 2003).

Other studies are related mainly to the role of temporary agency work in exit unemployment. A Spanish study shows how temporary agency work represents an opportunity to leave unemployment especially for those who experienced short term period as unemployed (Garcia-Perez and Munoz-Bullon, 2003).

Workers characteristics appear to be relevant in affecting such probability: The young (between 25 and 34 years old) with medium-high level of education are in fact more likely to obtain a stable job (Zijl, 2002). Evidence from the Netherlands shows that temporary agency work does not contribute to create a dual labour market. On the contrary, women and immigrants, that usually have a greater probability to get a temporary agency work,

³An overview of these studies has been carried out by OECD (2002).

have the same probability as the other workers to reach a stable employment, illustrating how this type of contract do not create a segmentation of the labour market (Russo, 1997). Also the duration of work experience appears relevant: evidence from Spain shows that continuing temporary agency work experiences end up usually in a stable employment (Malo and Munoz-Bullon, 2002).

Evidence from Great Britain shows that temporary agency workers are less satisfied about their work conditions, receive less training and lower wages in comparison to stable employees (Booth, 2002).

4. The econometric model

The main aim of the empirical analysis is to study the determinants of temporary help agency workers transitions, paying specific attention to both the role of training among the influencing factors and the existence of state dependence (i.e., a – positive – relation between the time spent in the initial state and the probability of transition, once controlling for individual heterogeneity).

With respect to traditional empirical literature on this topic, we explicitly model the impact of training and of temporary agency work employment spells on the probability of transition to different status in the labour market. Furthermore, the transition is considered not only towards permanent employment, but also to fixed term contracts (different from the initial temporary help contract), to unemployment or inactivity and to student status.

In order to model the transition rates in light of the above empirical objectives, we specify a competing risk hazard model in which temporary help workers can eventually leave the initial state to enter: (1) permanent employment; (2) other types of fixed-term contracts; (3) unemployment or inactivity; (4) any type of school leading to a formal degree.

Since we observe individuals at discrete points in time, we specify a discrete time duration model in which the probability of transition to a certain state depends on both observable individual characteristics and the baseline hazard function $\lambda(t)$. More specifically, we use a multinomial logit model estimating the probability of exiting temporary help employment to a certain state j (where j is equal to one of the four exit states mentioned above) conditioned on a set of personal characteristics X and the hazard function $\lambda_j(t)$ ⁴:

$$\Pr ob(Y = j) = \frac{\exp(\beta_j x_i + \lambda_j(t))}{1 + \sum_{k=1}^J \exp(\beta_k x_i + \lambda_k(t))} \quad j = 1, \dots, 4 \quad [1]$$

⁴ It has been shown that a discrete time duration model can be estimated using either an extended multinomial logit or a complementary log-log model (Allison, 1982). Similar results were actually obtained using a complementary log-log (cloglog) duration model. Results are available upon request. Note also that the extended data set has been estimated on a re-organized unbalanced panel data-set in which, for each person, we have as many rows as the number of time intervals at risk of exiting for that individual.

The baseline hazard function has been specified both parametrically (as the natural logarithm of t) and non parametrically (using a piecewise constant duration dependence function defined by a set of dummy variables, one for each t).

Note that a log specification of $\lambda(t)$ in a discrete time (logistic) model is the discrete time analogue to the continuous time Weibull model (Lancaster, 1990). On the other side, the use of a full non parametric baseline hazard function may impose less structure/constraints to the data.

5. The data

The present study is based on an ad hoc survey on a sample of 2.300 individuals who were hired with a temporary agency work contract in 2001 in Emilia-Romagna⁵.

The survey has gathered information on the socio-demographic characteristics of individuals, the labour market status both before and after the temporary agency work experience, the temporary job(s) characteristics (duration, number of temporary agency work experiences, economic sector, motivation for having a temporary agency work experience), counselling and training received (distinguishing between training provided by temporary help agencies and other types of training).

The dependent variable of the empirical model discussed in the previous section is then the individual status in the labour market registered in two points of time (December 2002 or December 2003) and it takes the following value: 1 if the individual remains a temporary agency worker; 2 if the transit is towards a permanent employment; 3 if the transit is towards a fixed term employment; 4 if the transit is towards unemployment or inactivity; 5 if the transit is towards the student status.

The independent variables considered are: age; sex; presence of children; marital status; family background (proxy using the educational attainment of the parents); education; number of temporary agency work experiences; economic sector of the main temporary agency work experience in 2001; training performed (both temporary agency work training and other training); employment status before 2001 (if employed or not); motivation about having choose temporary agency work; temporary agency work spells over two years after 2001. Temporary agency work spells have been calculated thanks to the availability of a matrix recording for every month in the two years after 2001 the individual state in the labour market. This information allowed to calculate the total number of months spent in temporary help employment (as well as in other states).

⁵ The research has been co-funded by the European Social Fund and Emilia-Romagna Region and promoted by the Emilia-Romagna Agency of Labour.

6. The results

6.1. *Main descriptive results*

Before the temporary agency work experience, the large part of the individuals were employed (38.5%), unemployed (36%) and students (23,4% of the total). These different type of workers had different approaches to the temporary agency work experience: the employed used temporary agency work experience while waiting for the right job, the unemployed have taken advantage from the temporary agency work experience as a mean for entering in the labour market and increasing their job skills and students used temporary agency work mainly as a financial support.

The temporary agency work experience of 2001 for these individuals mainly occurred in the manufacturing sector (over 50% of the total). Missions were on average short, lasting in one out of three cases between 1 month and 3 months. Nonetheless, 44% of the individuals interviewed had experienced only one mission through the year.

According to the workers, advantages of the temporary agency work experience were mainly related to the opportunity of being known by many using companies (43.2%), while the main disadvantages were related to the uncertainty and the fixed-term duration of the job (48.6%).

Some descriptive results related to the transition on the labour market after the temporary agency work experience of 2001 in the two following years show that almost one third of temporary agency workers in 2001 had moved by December 2002 to a stable employment and 26% to another fixed-term employment. Some temporary agency workers were unemployed in December 2002 (14%) while some others were still temporary agency workers (11%). The share of temporary agency workers in 2001 that were permanently employed by December 2003 reached 39%, while those with a fixed-term contract decreased to 22.5%. In December 2003 the share of temporary agency workers was only 7%.

When the status in the labour market before the temporary agency work experience is considered, it emerges that the share of unemployed has relevantly decreased moving from 36% of individuals in 2001 to 15% at the end of 2003. This could be a first descriptive evidence on the role of temporary agency work to create further opportunity for unemployed to enter in the labour market (table 1)..

Table 1 – Previous and following labour market status of temporary agency workers in 2001

	Before the temporary agency work experience of 2001 (%) A	January-02 (%) B	December-02 (%) C	December-03 (%) D	Δ A-B (%) E	Δ A-D (%) F
Permanent employment	15,9	19,8	31,0	38,9	3,9	23
Fixed-term employment	13,3	25,7	26,4	22,5	12,4	9,2
Temporary agency work	2,7	21,8	11,2	7,6	19,1	4,9
Self employed	3	1,2	1,7	2,4	-1,7	-0,6
Other employed	3,2	4,9	4,8	5,9	1,7	2,7
Unemployed	35,9	15,4	14,0	15,0	-20,5	-20,9
Student	23,4	7,6	6,3	5,5	-15,8	-18,1
Inactive	1,9	2	2,4	1,7	0,1	-0,2
No answer	0,3	1,6	1,2	0,4	1,3	0,1
Total	100,0	100,0	100,0	100,0		

Source: IRS elaboration on Emilia Romagna survey, 2004

As far as the training issue is concerned, from the survey it emerges how only a minority of individuals interviewed have been involved in training during the temporary agency work experiences in 2001 (14.7% of the total). There are no difference among the individuals attending this type of training in relation to their previous status on the labour market except for a greater involvement of students (17.2% against the average value 14.7%). Moreover, individuals involved in training are not different in terms of age, gender, duration of the temporary agency work experience.

Concerning the characteristics of the training courses during the temporary agency work experience it emerges that (table 2):

- ✓ almost half of the individuals participated mainly to short duration courses (less than 8 hours) occurred within companies, and 37% to external courses;
- ✓ short duration courses have mainly interested individuals over 30 years old (82.4%) while women were more involved in more complex and structured courses (66.7%);
- ✓ courses were mainly on general issues, not directly linked to the specific job to be performed by individuals. More often courses were focused on basic knowledge (safety and security 55%);
- ✓ two thirds of the individuals involved in training expressed a positive evaluation of the contents of courses, adults were usually more satisfied than the younger about the utility of training;
- ✓ training was anyway not considered useful in order to obtain another job, but only in order to increase skills and competencies (51.6%). For a relevant 37.3% of individuals training was not useful at all;
- ✓ in general adults agreed in considering that training during the temporary agency work experience has not increased their competencies as they were ready to be employed in companies and to perform the job. On the contrary young workers expressed the need to have a general knowledge on working conditions.

Table 2 – Characteristics of training during the temporary agency work experience in 2001

Type of training courses	% on the total temporary agency workers interviewed
Short duration courses in using companies	47,8
Complex and structured courses in using companies	34,8
Courses external to the using company	37,2
Total	100,0
Contents of training courses	
Labour market institutional setting	23,9
Work organization	24,2
Safety and job security	55,1
Basic IT knowledge	21,3
On the job training	14,9
Knowledge on the use of machines	29,4
Updating on the use of machines	14,6
Problem solving techniques	5,2
Marketing and communication techniques	20,1
Development of relationship capabilities	14,6
Acquisition of new skills and competencies	20,4
No answer	0,6
Other	0,6
Total	100,0
Degree of satisfaction about training courses during the temporary agency work experience	
Very satisfied	62,7
Non satisfied	35,9
No answer	1,5
Total	100
Advantage of training during the temporary agency work experience	
Opportunity to get a stable employment	10,7
Opportunity to get other fixed-term employment	3,7
Opportunity to increase their skills and competencies	51,6
Increasing knowledge about the labour market functioning	7,9
Improving of general knowledge	20,5
Increasing self confidence	2,8
Other	1,4
No answer	1,4
Total	100
Disadvantage of training during the temporary agency work experience	
No help in finding a stable employment	26,0
No help in improving skills and competencies	36,6
Contents of courses was too theoretical	12,2
Lost of time and money	17,9
Other	6,5
No answer	0,8
Total	100

Source: IRS elaboration on ad hoc survey, 2004

6.2. Main econometric results

Table 3 shows the estimation of the transition probabilities at December 2002, while on table 4 shows the same estimates at December 2003.

Both sets of estimates present a similar contribution of independent variables on the probability of transition. We comment the estimation at December 2002 underlining dissimilarities with the Dec.2003 estimates, when relevant.

Previous employment experiences and the characteristics of the temporary agency work experience (in terms of duration and number of missions) appear to be key variables in determining the transition from temporary agency work to all the other labour market status, while the role of training and workers characteristics varies according to different status. In details:

- ✓ *a previous work experience as a permanent employee* increases significantly the probability to move to a stable employment again and decreases the probability to remain a temporary worker, or to become unemployed or inactive;
- ✓ *the duration of the temporary agency work experience* over the period of time considered has a significant negative impact on the probability of transition to all the other status in the labour market. The state dependence relation between the cumulative spell of the temporary agency work status and the probability of transition seems valid on the short run: the probability to move toward permanent employment increases in the first six months of interim work, to decline afterwards as the duration of the interim spell increases (fig. 1). When the non continuous specification of the duration spell is used, it is clear how the spells over 12 months have no impact on the probability of transition;
- ✓ *the number of temporary agency work experiences* links the individual to temporary agency work: the probability to exit to other conditions declines as the number of the temporary agency work experiences increases;
- ✓ *training performed during the temporary agency work experience* has a negative impact on the probability to move to other status, underlining how this kind of training tends to link workers to the temporary help agency and then increases the probability for individuals to remain in the temporary agency work status. On the contrary the other forms of training increase the probability to move towards fixed term contracts, but has no impact on the probability to move toward a stable employment;
- ✓ *the economic sectors where the temporary agency work experience has been done* has not a relevant impact on the future mobility of these workers on the labour market.

Socio-demographic variables do not appear relevant in increasing the probability to move toward a permanent job: at least in the case of the Emilia Romagna Region, characterised by a relevant incidence of the industrial sector and a relatively strong labour market for blue collar workers, it is more relevant to have worked in a stable job before the temporary work experience.

On the other hand education and age are significant in affecting the probability to move from a a temporary help job toward a fixed term employment contract or toward unemployment or inactivity. *A tertiary educational level* with respect to the primary educational level facilitate the individual to move from a temporary agency work to a fixed term employment and at the same time it reduces the probability to fall into unemployment or inactivity. Adults *over 30 years* old have a greater probability to fall in the unemployment status or into inactivity after a temporary agency work experience. On the contrary for the young and women it is easier to become to get a fixed term contract. *The family background* also appears to be a relevant variable: if the parents have a high education is less probable that the individual move to a stable employment while it is greater their probability to fall into unemployment or inactivity.

7. Some preliminary conclusions

The statistical and econometric analysis has shown that in Emilia Romagna temporary help workers are very heterogenous both in relation to their labour market condition before and after the interim work experience, which ask for diversified policy tools. The transitions out of interim work show a strong relation with the labour market status *before* interim work.

In a strong labour market, such as the Emilia Romagna one, the probabilities to exit interim work for a stable job are highest for *workers with previous stable work experiences*, usually as blue collar workers. For these individuals, usually with a low educational background, agency work is an efficient way to get access to new stable jobs and temporary help agency act effectively as intermediaries in the job matching process. The interim work experience for this group of workers is usually made up of few missions of with a medium-long duration in the industrial sector.

Young people, instead, usually have previous experiences as temporary workers and have a higher probability to stay in temporary jobs, even if different from interim work. The probability to remain in temporary jobs is higher for women and for those with higher than lower secondary education. This group is characterized by a greater fragmentation of interim work relative to the previous one, with a large number of missions in different firms. This is the typology of workers on which is necessary to intervene with preventive measures in order to reduce the risk that temporary work becomes a "trap". A risk which appears to be higher for young women.

Another group which needs a support is that made by low educated adults, with previous spells of non employment before the interim experience. This group has the highest probability to go back to unemployment or inactivity.

Finally, students have an instrumental use of interim work, to get an income while studying and to get some work experience. They usually take only few missions of short durations, mainly in the service sector.

Table 3
Probability of transition from temporary agency work contract to other status in the labour market
December 2002

Labour market status in December 2002	Relative risk ratio ^a	Std. Err.	t ^b
<i>Permanent employment</i>			
Over 30 years old	0.97	0.09	-0.29
Women	1.06	0.10	0.59
With children	1.25	0.17	1.60
Married	0.87	0.11	-1.11
Parents with high education	0.56	0.11	-2.82**
Parents with medium education	0.95	0.10	-0.46
Tertiary education	1.11	0.17	0.65
Secondary education	1.02	0.11	0.20
Professional education (not secondary education)	0.91	0.15	-0.56
Spell of temporary agency work experience	0.99	0.05	-0.21
2/5 temporary agency work experiences	0.45	0.04	-8.98**
over 5 temporary agency work experiences	0.25	0.06	-5.37**
Agriculture and fishery sectors for temp. agency work exp.	4.05	3.23	1.75*
Mechanic and metalmechanic sectors for temp. agency work exp.	0.99	0.11	-0.07
Trade sectors for temp. agency work exp.	1.25	0.18	1.60
Other sectors for temp. agency work exp.	1.25	0.17	1.66*
Training during the temp. agency work exp.	0.52	0.07	-4.83**
Other training	1.17	0.12	1.51
Permanent employee before 2001	1.61	0.17	4.61**
Voluntary temp. agency worker for flexibility reasons	1.09	0.15	0.62
Voluntary temp. agency worker waiting for a better job	1.30	0.13	2.59**
<i>Fixed term employment</i>			
Over 30 years old	0.84	0.08	-1.85*
Women	1.17	0.11	1.75*
With children	0.82	0.12	-1.30
Married	0.91	0.12	-0.74
Parents with high education	0.99	0.15	-0.08
Parents with medium education	0.94	0.09	-0.65
Tertiary education	1.51	0.22	2.84**
Secondary education	1.18	0.14	1.42
Professional education (not secondary education)	1.21	0.21	1.12
Spell of temporary agency work experience	0.87	0.04	-2.92**
2/5 temporary agency work experiences	0.47	0.04	-8.54**
over 5 temporary agency work experiences	0.43	0.09	-3.91**
Agriculture and fishery sectors for temp. agency work exp.	3.52	2.79	1.59
Mechanic and metalmechanic sectors for temp. agency work exp.	0.81	0.09	-2**
Trade sectors for temp. agency work exp.	1.30	0.17	2.07**
Other sectors for temp. agency work exp.	1.18	0.15	1.34
Training during the temp. agency work exp.	0.75	0.09	-2.42**
Other training	1.21	0.12	2.03**
Permanent employee before 2001	0.74	0.10	-2.25**
Voluntary temp. agency worker for flexibility reasons	1.36	0.17	2.54**
Voluntary temp. agency worker waiting for a better job	1.23	0.12	2.07**

Unemployment or inactivity

Over 30 years old	1.30	0.17	1.94**
Women	1.09	0.14	0.70
With children	1.29	0.24	1.40
Married	0.92	0.16	-0.49
Parents with high education	1.75	0.34	2.86**
Parents with medium education	0.98	0.14	-0.12
Tertiary education	0.46	0.11	-3.23**
Secondary education	0.84	0.12	-1.22
Professional education (not secondary education)	1.06	0.23	0.26
Spell of temporary agency work experience	0.88	0.06	-1.95**
2/5 temporary agency work experiences	0.52	0.06	-5.33**
over 5 temporary agency work experiences	0.41	0.12	-2.98**
Agriculture and fishery sectors for temp. agency work exp.	2.67	2.86	0.91
Mechanic and metalmechanic sectors for temp. agency work exp.	0.79	0.11	-1.64*
Trade sectors for temp. agency work exp.	1.16	0.22	0.78
Other sectors for temp. agency work exp.	1.08	0.19	0.43
Training during the temp. agency work exp.	0.92	0.15	-0.54
Other training	1.17	0.17	1.07
Permanent employee before 2001	0.63	0.11	-2.61**
Voluntary temp. agency worker for flexibility reasons	1.37	0.24	1.82*
Voluntary temp. agency worker waiting for a better job	0.97	0.15	-0.21

Labour market status in December 2002	Relative risk ratio ^a	Std. Err.	t ^b
Student status			
Over 30 years old	0.07	0.04	-5.04**
Women	1.14	0.24	0.61
With children	1.27	0.77	0.40
Married	0.15	0.12	-2.44**
Parents with high education	0.94	0.27	-0.23
Parents with medium education	1.30	0.26	1.29
Tertiary education	1.76	0.69	1.42
Secondary education	1.16	0.41	0.42
Professional education (not secondary education)	0.27	0.28	-1.25
Spell of temporary agency work experience	0.49	0.06	-5.46**
2/5 temporary agency work experiences	0.34	0.07	-5.24**
over 5 temporary agency work experiences	0.37	0.23	-1.61
Agriculture and fishery sectors for temp. agency work exp.	12.37	16.29	1.91*
Mechanic and metalmechanic sectors for temp. agency work exp.	0.71	0.18	-1.30
Trade sectors for temp. agency work exp.	0.82	0.22	-0.72
Other sectors for temp. agency work exp.	1.03	0.29	0.11
Training during the temp. agency work exp.	0.48	0.14	-2.61**
Other training	0.53	0.13	-2.54**
Permanent employee before 2001	0.16	0.12	-2.49**
Voluntary temp. agency worker for flexibility reasons	13.80	4.12	8.8**
Voluntary temp. agency worker waiting for a better job	3.53	1.14	3.9**

The category "temporary agency work" is the base category

Pseudo R²= 0.0685

a) The relative risk ratio (RRR) represents the relative probability of a score with respect to the base category $\Pr(Y=2)/\Pr(Y=1)$. A RRR lower than 1 indicates a negative coefficient, and then a negative impact, of the variable considered on the probability of the score considered; on the contrary a RRR greater than 1 indicates a positive impact.

b) The *t* indicates the precision of the coefficient, namely how much the estimated coefficient is significantly different from zero.

** statistical significance at 5%

* statistical significance at 10%

Source: IRS elaboration, 2004

Table 4
Probability of transition from temporary agency work contract to other status in the labour market
December 2003

Labour market status in December 2003	Relative risk ratio ^a	Std. Err.	t ^b
Permanent employment			
Over 30 years old	0.83	0.07	-2.11**
Women	0.97	0.08	-0.38
With children	1.28	0.16	1.93**
Married	0.96	0.11	-0.34
Parents with high education	0.61	0.11	-2.82**
Parents with medium education	0.90	0.08	-1.18
Tertiary education	1.44	0.20	2.69**
Secondary education	1.09	0.11	0.88
Professional education (not secondary education)	1.12	0.16	0.79
Spell of temporary agency work experience	0.95	0.04	-1.24

2/5 temporary agency work experiences	0.52	0.04	-8.28**
over 5 temporary agency work experiences	0.32	0.07	-5.55**
Agriculture and fishery sectors for temp. agency work exp.	5.12	3.48	2.41**
Mechanic and metalmechanic sectors for temp. agency work exp.	0.97	0.09	-0.37
Trade sectors for temp. agency work exp.	1.19	0.15	1.42
Other sectors for temp. agency work exp.	1.21	0.14	1.58
Training during the temp. agency work exp.	0.51	0.06	-5.63**
Other training	1.18	0.11	1.84*
Permanent employee before 2001	1.43	0.14	3.83**
Voluntary temp. agency worker for flexibility reasons	1.10	0.14	0.74
Voluntary temp. agency worker waiting for a better job	1.29	0.12	2.85**
<i>Fixed term employment</i>			
Over 30 years old	0.81	0.08	-2.13**
Women	1.36	0.13	3.28**
With children	0.89	0.14	-0.72
Married	0.75	0.11	-1.92**
Parents with high education	1.04	0.16	0.26
Parents with medium education	0.99	0.10	-0.11
Tertiary education	1.45	0.22	2.41**
Secondary education	1.11	0.14	0.87
Professional education (not secondary education)	1.14	0.22	0.69
Spell of temporary agency work experience	0.88	0.04	-2.79**
2/5 temporary agency work experiences	0.50	0.05	-7.55**
over 5 temporary agency work experiences	0.36	0.09	-4.29**
Agriculture and fishery sectors for temp. agency work exp.	4.86	3.88	1.98**
Mechanic and metalmechanic sectors for temp. agency work exp.	0.93	0.11	-0.66
Trade sectors for temp. agency work exp.	1.48	0.20	2.98**
Other sectors for temp. agency work exp.	1.28	0.17	1.87*
Training during the temp. agency work exp.	0.80	0.10	-1.88*
Other training	1.23	0.12	2.04**
Permanent employee before 2001	0.71	0.10	-2.44**
Voluntary temp. agency worker for flexibility reasons	1.38	0.17	2.53**
Voluntary temp. agency worker waiting for a better job	1.23	0.13	1.91*
<i>Unemployment or inactivity</i>			
Over 30 years old	1.29	0.17	1.88*
Women	1.30	0.16	2.09**
With children	1.27	0.23	1.34
Married	0.89	0.15	-0.69
Parents with high education	1.27	0.28	1.09
Parents with medium education	1.05	0.15	0.36
Tertiary education	0.37	0.09	-3.95**
Secondary education	0.70	0.10	-2.49**
Professional education (not secondary education)	0.95	0.21	-0.22
Spell of temporary agency work experience	0.87	0.05	-2.19**
2/5 temporary agency work experiences	0.52	0.06	-5.43**
over 5 temporary agency work experiences	0.51	0.14	-2.55**
Agriculture and fishery sectors for temp. agency work exp.	2.91	3.13	0.99
Mechanic and metalmechanic sectors for temp. agency work exp.	0.72	0.10	-2.29**
Trade sectors for temp. agency work exp.	0.99	0.19	-0.07
Other sectors for temp. agency work exp.	1.03	0.18	0.14
Training during the temp. agency work exp.	0.91	0.14	-0.63
Other training	1.02	0.15	0.12

Permanent employee before 2001	0.56	0.10	-3.18**
Voluntary temp. agency worker for flexibility reasons	1.37	0.24	1.8*
Voluntary temp. agency worker waiting for a better job	0.96	0.15	-0.28
Student status			
Over 30 years old	0.08	0.05	-4.21**
Women	0.92	0.21	-0.35
With children	0.00	0.00	0.00
Married	0.40	0.29	-1.25
Parents with high education	0.79	0.24	-0.79
Parents with medium education	1.54	0.33	2.02**
Tertiary education	0.86	0.42	-0.30
Secondary education	1.38	0.55	0.81
Professional education (not secondary education)	0.00	0.00	0.00
Spell of temporary agency work experience	0.56	0.07	-4.72**
2/5 temporary agency work experiences	0.35	0.08	-4.8**
over 5 temporary agency work experiences	0.41	0.22	-1.63
Agriculture and fishery sectors for temp. agency work exp.	0.00	0.00	0.00
Mechanic and metalmechanic sectors for temp. agency work exp.	0.80	0.22	-0.81
Trade sectors for temp. agency work exp.	1.11	0.33	0.35
Other sectors for temp. agency work exp.	1.56	0.46	1.51
Training during the temp. agency work exp.	0.34	0.11	-3.37**
Other training	0.57	0.15	-2.08**
Permanent employee before 2001	0.20	0.15	-2.2**
Voluntary temp. agency worker for flexibility reasons	11.80	3.74	7.79**
Voluntary temp. agency worker waiting for a better job	3.42	1.18	3.56**

The category "*temporary agency work*" is the base category

Pseudo R²= 0.0634

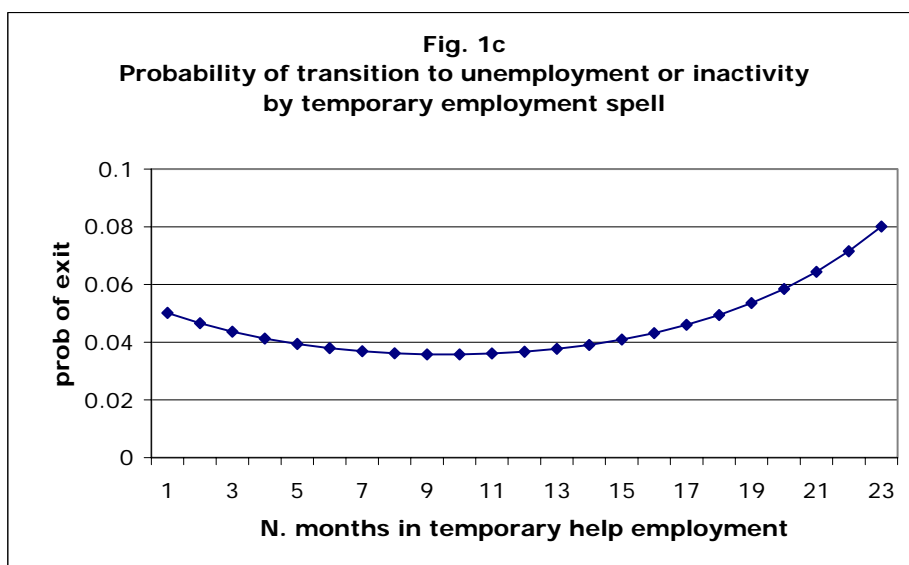
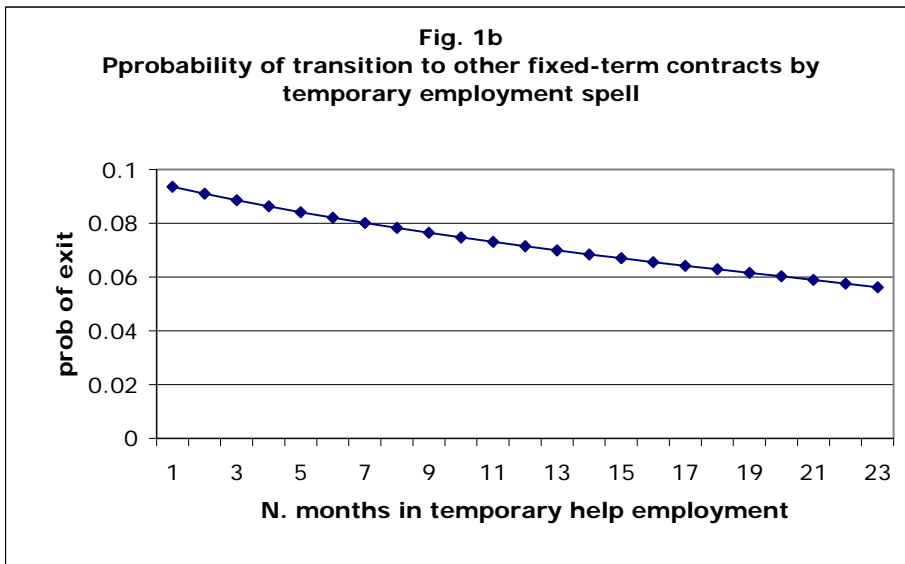
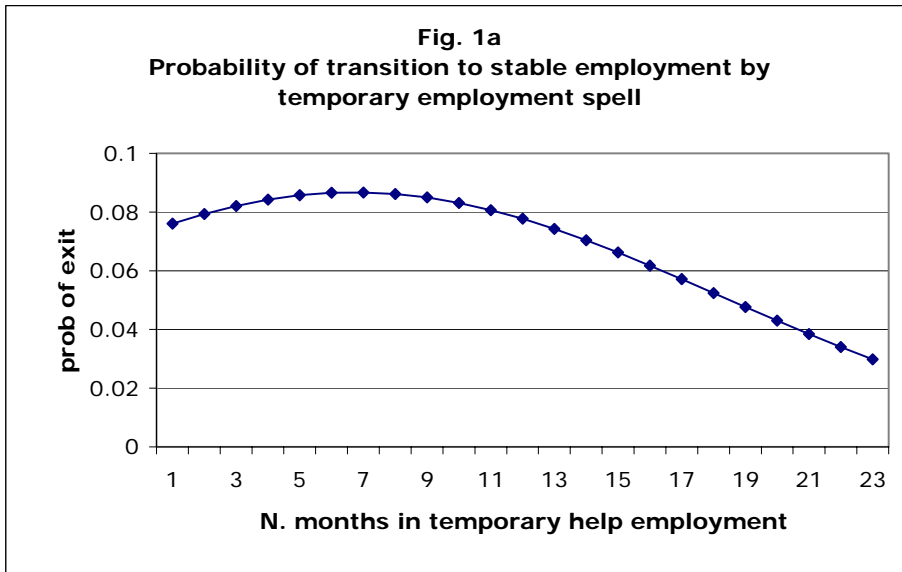
- a) The relative risk ratio (RRR) represents the relative probability of a score with respect to the base category $\Pr(Y=2)/\Pr(Y=1)$. A RRR lower than 1 indicates a negative coefficient, and then a negative impact, of the variable considered on the probability of the score considered; on the contrary a RRR greater than 1 indicates a positive impact.
- b) The *t* indicates the precision of the coefficient, namely how much the estimated coefficient is significantly different from zero.

** statistical significance at 5%

* statistical significance at 10%

Source: IRS elaboration, 2004

Figure 1
Probability of transition by exit state and temporary employment spell



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