

# **Employment outcomes of Short-time work scheme and Unemployment insurance program beneficiaries: a longitudinal approach.**

*Maurizio Sorcioni – Giuseppe De Blasio*

***Abstract.** This paper collects some of the main empirical evidences of a recent report - Measures to tackle the crisis. The Agreement State Regions February 2009.-, promoted by the Italian Ministry of Labour and realized by Italia Lavoro and ISFOL, in collaboration with INPS. The report aims at monitoring the policy measures introduced to face the recent economic downturn and implemented in the context of the 2009 Regional Agreement. In particular way, the main objective of this paper is to analyze the employment outcomes of the Short-time work scheme and unemployment insurance program beneficiaries, through the use of a longitudinal approach.*

***Key Words:** Short-time work scheme, Unemployment insurance, administrative sources, longitudinal approach.*

## **1 Introduction: the policy measures in the context of the 2009 Regional Agreement.**

The recent report of the Ministry of Labour, - *Measures to tackle the crisis. The Agreement State Regions February 2009* - realized by Italia Lavoro and ISFOL, in collaboration with INPS, aims at monitoring the policy measures introduced to face the recent economic crisis, in the context of the 2009 Regional Agreement.

More specifically, the study addresses to analyze the evolution of the active and passive labour programmes envisaged by the Agreement and implemented during the period 2009-2011. It includes an analysis of the number of beneficiaries in derogation (*beneficiaries of Wage compensation fund in derogation, i.e. Cassa Integrazione in deroga – hereafter CIGD - and Mobility allowance, i.e. Mobilità*) and the level of their participation in policy measures promoted by the Regions, with the aim to provide an exhaustive description of the economic resources derived from the national, regional and European (*ESF*) funds.

The most innovative aspect of the analysis is the use of two administrative data sources. The first one is represented by the National System of Income Support Scheme Beneficiaries (*hereafter, SIP*), realized by the National Institute for Social Security (*INPS*). The second one is the System of Compulsory Communications (*hereafter, CC*). It contains all information about the Italian labour market inflows and outflows. As a matter of fact, hires, separations and modifications of job contracts should be notified by employers to the Ministry of Labour and CC records details of these information.

The statistical use of these sources allow to observe the evolution of the main characteristics of the 2009 Regional Agreement programme beneficiaries. Through a longitudinal analysis we provide a first preliminary attempt to assess the effectiveness of these programmes.

This paper is divided in two parts. The first deals with the temporarily laid off workers that receive an income support (*Wage compensation fund in derogation*). In this section we monitor the change of beneficiaries' employment status during a 12 month period, on the basis of SIP dataset. Two different cohorts of beneficiaries are considered: individuals who receive the income support during 2009 and those that receive the benefit during 2010. Both cohorts are followed in order to detect three possible conditions: a) permanence in the same status (*suspended workers*); b) transition from the suspension condition to the unemployment status (*unemployment or mobility*); c) transition from the suspension condition to the employment status (*employment*).

The focus of the second part of this paper is on the cohort of 2009 beneficiaries of Mobility allowance in derogation (*Mobilità in deroga*). In this case, the aim is to estimate the number of those individuals that receive at least one job experience in the 24 months after the beginning of the treatment.

In the first section the comparison between the employment outcomes of 2009 and 2010 participants is useful since it offers some preliminary evidences about the effects of the 2009 Regional Agreement. Indeed, the policy measures introduced in 2009, after a starting phase, became effective in 2010. This means that we can consider differences in the employment outcomes between these two cohorts as a partial and indirect effect of the policy measure introduction.

On the other hand, the second phase of the analysis exploits the linkage with the CC and SIP, managed by the Italian Ministry of Labor, with the purpose to follow the beneficiaries of *Mobilità* and evaluate their employment outcomes in the 24 months

after the beginning of the treatment. In this case, we distinguish between ordinary and in derogation beneficiaries by highlighting the differences between the two categories.



100% (zero hours)	25,39	37,81	11,78	1,45	14,06	2,45	7,06	100
From 75% to 99%	32,77	35,23	9,29	2,71	14,92	2,18	2,9	100
From 50% to 74%	34,49	40,26	8,29	3,59	10,99	1,19	1,19	100
Form 25% to 49%	41,2	39,91	7,06	3,96	6,79	0,68	0,41	100
No more than 24%	49,31	36,59	6,69	3,23	3,53	0,4	0,25	100
Total cohort	36,46	38,22	8,62	3,02	9,92	1,36	2,4	100
<i>CIGD workers who complete the first treatment in 2010. Percentage values for status at 12 months (N = 209.923)</i>								
Duration classes of CIGD in hours	No longer present in the SIP (A)	re-suspended			unemployment allowance			Totale %
		B	C	D	E	F	G	
100% (zero hours)	27,14	28,91	13,86	0,73	11,63	2,70	15,03	100
From 75% to 99%	36,09	28,37	11,94	1,44	14,67	2,79	4,69	100
From 50% to 74%	40,67	29,55	11,47	3,44	11,27	1,50	2,10	100
Form 25% to 49%	46,97	31,03	8,84	4,74	6,61	0,85	0,95	100
No more than 24%	55,95	26,96	6,88	5,50	3,70	0,57	0,43	100
Total cohort	42,67	29,03	10,22	3,47	8,76	1,52	4,33	100

Source: Italia Lavoro and ISFOL on data INPS and Ministero del Lavoro

#### Legend

- A) Workers no longer in the SIP (reintegrated);
- B) Workers present in SIP with a new treatment of Wage compensation fund in derogation (CIGD)
- C) Workers in SIP with a new treatment of Wage compensation fund not in derogation (CIGS)
- D) Workers present in SIP with other treatments of suspension
- E) Workers present in SIP with an unemployment Mobility in derogation allowance, (Mobilità in deroga)
- F) Workers present in SIP with unemployment ordinary mobility allowance, (Mobilità Ordinaria)
- G) Workers present in SIP with an unemployment allowance, (Indennità di disoccupazione)

The share of beneficiaries of a further temporarily laid-off treatment decreases from 49,8% in 2009 to 42,7% in 2010. The share of dismissed workers raises of one percentage point, passing from 13,6% to 14,6%.

Although this percentage difference is slight, it is interesting to observe that the recent crisis determines an increase in the share of reinstated workers and a decrease in the share of suspended workers, while the percentage of laid-off workers remains essentially the same.

These evidences seem to confirm that investments in active policy measures realized in the context of the 2009 Regional Agreement have encouraged a correct utilization of CIGD, preserving firms from collective dismissal and favouring workers' reinstatement.

Obviously the duration of the wage compensation fund in derogation (i.e. hours of "suspension" referred to workers involved) affects the results: the lower the number of suspension hours, the greater the likelihood of return to the company. For workers at "zero hour" (those most at risk of dismissal for companies in crisis) the percentage of those being resettled grows from 25.4% of the cohort in 2009 to 27.1% of that of 2010 and the share of reinserted is clearly superior in all the different classes of duration.

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These preliminary results do not allow to estimate the causal effect of active policies, and this aspect remains an area of further research. This could be possible through:

- the acquisition of the Regional labour informative systems that allow to access individual data on CIGD workers' participation to policy measures and analyze the effects of different treatments on the changes of employment status;
- the adoption of counterfactual models. In particular way, a control group could be represented by those CIDG beneficiaries that do not take part to active policy measures.

The second part of this paper regards the analysis of workers who are laid off and receive the Mobility allowance.

In this case, we distinguish between the beneficiaries of the treatment in derogation from those who receive an ordinary treatment. We analyze the employment outcomes of these two groups in the 24 months after the beginning of the treatment period.

Table 2 shows a summary of the results. More specifically, 47,2% of the first group workers does not receive any job contract, while 52,8% obtains a job. In particular way, 16,8% of all beneficiaries of this group has a permanent contract. These results seem to be interesting especially considering that they are observed during the peak of the recent economic downturn.

On the other hand, the second group is related to the beneficiaries of the ordinary Mobility allowance (*Mobilità ordinaria*) – that are not included in the 2009 Regional Agreement. We observe, in this case, that the share of participants who receive at least a job contract is 47,9%.

Hence, it seems evident that the probability to obtain a job contract is higher for beneficiaries of the treatment in a derogation regime rather than those in an ordinary regime.

Analogous considerations are possible when we take into account the type of contract. As a matter of fact, the share of participants who receive a permanent job contract is higher for beneficiaries of treatment in law derogation. Although this result could be seen as the consequence of the systematically different characteristics of firms involved in the programmes, we believe that the participation to the labour policy measures represents the main motive of this phenomenon. As said above a counterfactual approach could allow to separate these effects.

***Table 2: Longitudinal analysis on workers who start the first treatment in Mobility in 2009. Percentage of Workers who sign at least an employment contract in 24 consecutive months.***

	Mobilità in deroga		Mobilità ordinaria	
	v.a	v.%	v.a	v.%
<b>Workers who start the first treatment in Mobility in 2009</b>	<b>18.925</b>	<b>100,0</b>	<b>62.747</b>	<b>100,0</b>
<i>Workers who do not sign any contract of employ-</i>	8.930	47,2	32.670	52,1

ment within 24 months

<i>Workers who sign at least an employment contract in 24 consecutive months</i>	9.925	52,4	30.077	47,9
<i>Workers who sign at least a permanent employment contract (permanent job) in 24 consecutive months</i>	1.667	8,8	3.248	5,2
<i>Workers who sign at least a temporary employment contract in 24 consecutive months</i>	8.258	43,6	26.829	42,8
<i>Workers who sign at least a temporary employment contract transformed in permanent contract in 24 consecutive months</i>	1.189	6,3	5.929	9,4
<i>Workers who sign at least a temporary employment contract not transformed in permanent contract in 24 consecutive months</i>	7.069	37,4	20.900	33,3
<i>Average waiting days for workers who sign at least an employment contract in 24 consecutive months</i>		278		226

Source: Italia Lavoro and ISFOL on data INPS and Ministero del Lavoro

## 1.2 Survival analysis: an application of the Kaplan Meier model to the Mobility allowance beneficiaries.

To deepen the descriptive analysis, we propose in this paragraph an application of the Kaplan Meier survival analysis approach to estimate the probability of exit from the unemployment status for the Mobility allowance beneficiaries.

Although this approach is widely used in epidemiological contexts, we believe that there is a certain analogy between the two fields. A previous application of survival analysis models with Kaplan Meier method was carried out by the Region of Sardinia and Italia Lavoro in the analysis of the customers of the centers for employment services. The study aims at calculating the probability of the unemployed members to leave the administrative unemployment status.

In this paper, we apply the Kaplan Meier method to the two cohorts of beneficiaries of the ordinary Mobility allowance and the Mobility allowance in derogation. The analysis

is conducted on 2009 beneficiaries and allows to estimate the probability to leave the unemployment status during the 24 months after the beginning of the treatment.

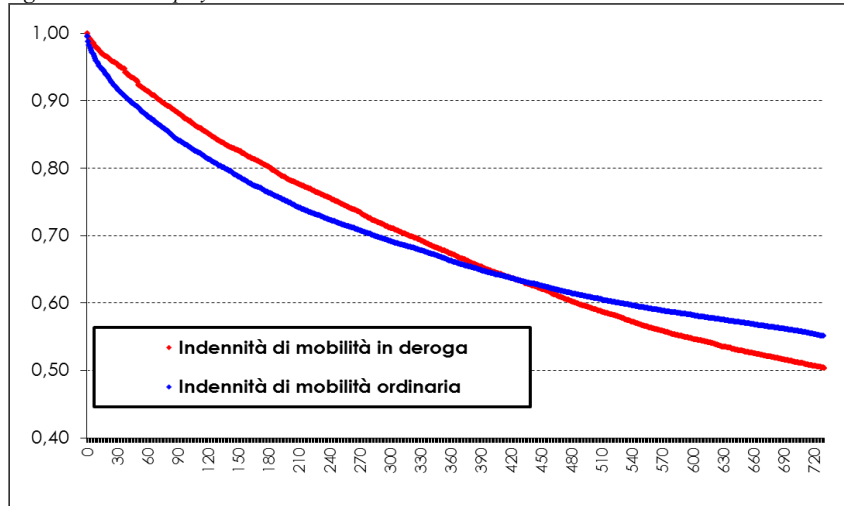
The integration of the two administrative sources permits to estimate this probability, differentiating by different social groups. *Figure 1* shows the probability of survival between the two forms of treatment (ordinary and in derogation). The results suggest that beneficiaries of Mobility in derogation are characterized by a higher probability to find a (dependent or parasubordinate) job.

On the other hand, *Figure 2* shows the different survival curves for beneficiaries of Mobilit , according to their geographical origin. In this case, it is possible to observe an evident difference in the employment probability. As a matter of fact, only 30% of

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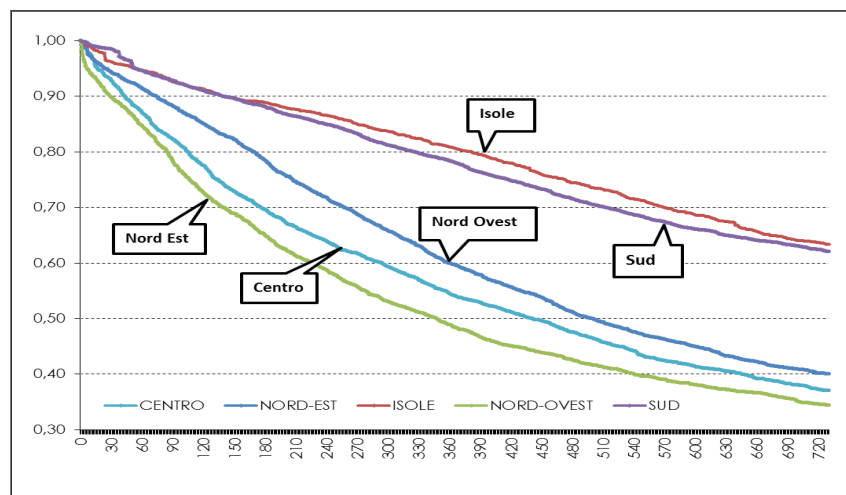
the beneficiaries in the North East area remains in the initial condition (unemployed), while the most part could find a job. These probabilities are significantly lower when we consider participants from the South.

Figure 1 Survival distribution with Kaplan Meier method for workers who start in 2009 the Mobility allowance treatment (in derogation and ordinary). Probability to sign at least an employment contract in 24 consecutive months



Fonte: elaborazione Italia Lavoro su dati INPS e Ministero del Lavoro

Figure 2 Survival distribution with Kaplan Meier method for workers who start in 2009 the mobility allowance treatment (in derogation and ordinary). Probability to sign at least an employment contract in 24 consecutive months for North West, North East, Central and Southern Italy.



Fonte: elaborazione Italia Lavoro su dati INPS e Ministero del Lavoro

### 1.3 Conclusion

The results in this paper reveal some interesting aspects that need a further investigation. The use of counterfactual approach[5] is necessary in order to assess the causal effect of the policy measures adopted. In this regard, we also believe that the introduction of Cox regression models [6], in the survival analysis approach, could be useful in order to establish the factors that may contribute to determine the change of status (age, sex and sector). Finally, the access to individual data of participants in various policy measures could increase highly the informative power of the analysis. In conclusion, although a number of areas for further research remains and seems necessary, this paper can be considered as a first attempt to valorise administrative data sources in the analysis of policy measure impact. We believe that future studies on this topic could not more leave aside from this type of data.



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