XXV CONFERENZA ITALIANA DI SCIENZE REGIONALI

EVALUATING ACTIVE LABOUR POLICIES IN ITALY: A REGIONAL ANALYSIS

Carlo ALTAVILLA[1], Floro E. CAROLEO[2]

1 Università di Napoli "Parthenope", Via Medina 40, 80133, Napoli.
2 Università di Salerno, Via Ponte Don Melillo, 84084 Fisciano (SA).

ABSTRACT

This paper focuses on the theoretical and empirical relevance for policymakers to use Active Labour Market Programs (ALMP) in order to affect unemployment and employment regional dynamics. In particular, the study aims at analyzing whether ALMP might have asymmetric effects in different regions where the programs apply.
To this end, the research analysis alternative theoretical and econometric models thought to capture the possible effects that active and passive labour market policies might have on employment and unemployment dynamics. The theoretical model is based on the Beveridge Curve framework derived from a matching function combined with job search theory
The econometric methodologies implemented are the Generalized Method of Moment (GMM) which is a more modern approach to instrumental variable estimation and the Panel Vector Autoregression (P-VAR) which is used for the impulse-response analysis.
The evidence emerging from these models suggests that the effects of ALMP on unemployment are not similar across the Italian regions. It follows that some active programs are likely to exert a greater effect in the South than in the North.

1 INTRODUCTION

Since the beginning of the Nineties, the *OECD Jobs Study* has emphasised the role of active labour market policies (ALMP) in reducing structural unemployment.
Moreover, the *European Employment Strategy*, launched in the Luxembourg Job Summit and restated in the Lisbon strategy, assigns to ALMP the task of increasing investments in human capital as well as of attracting more people to the labour market.
The reason why a government should adopt ALMP in reducing unemployment can be demonstrated by a variety of theoretical models. In these models, the implementation of ALMP leads to a positive effect on the matching process as well as on job competition. Other advantages are related to a rise in productivity and to a better allocation of labour among sectors and to geographic mobility.
However, in spite of theoretical and political preferences on ALMP spending, real data show a quite different picture. In the period from 1985 to 2000, the OECD countries did not significantly increase expenditure on active programmes as a percentage of the GDP - less than 1%, on the average. Moreover, there is no tendency to switch resources from passive to active programmes.
Actually, there are ambiguous effects that ALMP might have on the regular labour demand. An active labour policy might produce a crowding-out effect through the well-known *deadweight effect*, the s*ubstitution effect*, or an a*ccommodation effect on wage setting*.
For these reasons, the net employment effect of ALMP is an empirical issue. From this consideration, derives the importance of monitoring and evaluating the ALMP.
There is a large quantity of empirical literature focusing on whether ALMP have positive effects on unemployment. Most of these studies apply microeconometric techniques to evaluate the effects of ALMP on individual performance. Other studies use macroeconometric models to analyze the net effect of ALMP on the whole economy.
In this paper, we have chosen a macroeconomic perspective. The empirical analysis is based on a variety of econometric techniques thought to capture the possible effects that active and passive labour market policies might have on employment and unemployment dynamics. In particular, the aim of the paper is to assess whether ALMP might have asymmetric effects in different regions where the program applies. The analysis employs panel data models for the 20 Italian regions. Problems concerning the evaluation of the effect of regional policies are naturally studied within this framework. The sample period goes from 1996:1 to 2002:6. The data used in the empirical analysis were drawn from the “Rapporto di Monitoraggio of Minwelfare”.

2 THE ALMP AND THE OECD PERSPECTIVE

The well-known *OECD Jobs Study* (OECD, 1994; OECD, 1996) strengthened the emphasis on active labour market policies (ALMP) as a means of fighting the structural unemployment (Layard, Nickell and Jackman, 1991). The general agreement was on the need to shift the focus of labour market policies from the passive provision of income support to more active measures which assist reemployment. The reason was that subsidies, raising the reservation wage, have strong negative effects on the length of unemployment and on job search intensity. Active labour measures, on the other hand, can improve the matching of the demand and supply of labour and reduce the long-term unemployment of disadvantaged workers[1].

The European Employment Strategy (EES), launched in the Luxembourg Job Summit (November, 1997), on the basis of the new provisions in the Employment Title of the Treaty, and revamped in the Lisbon strategy (Lisbon European Council, March, 2000), has given a new impulse to ALMP, stressing its importance not only as an alternative to subsidies but also in itself. As a matter of fact, the European Strategy assigns to ALMP the task of increasing the adaptability of workers and enterprises, of attracting more people to the labour market and of making the investment in human capital more effective by adopting a preventive and more active approach towards the unemployed (Commission of European Communities, 2003).

Country reviews have however revealed that ALMP have been quite a limited success, suffering from ineffective delivery, monitoring and evaluating mechanisms, as well as poor targeting and other design problems. This means that, in spite of theoretical and political preference in favour of ALMP spending, data show a quite different picture. Spending on active programmes on the average in the OECD countries increased very little from 1985 to 2000 as a percentage of the GDP (from 0.7 to 0.8) (Martin and Grubb, 2001). The same trend occurred in the European countries (from 0.9 to 1.0). There is no tendency to switch resources from passive to active programmes, both moving in accordance with unemployment.

The following figures 1 and 2 show the evolution of expenditure in active and passive policies across various EU and non-EU countries over the 1980s and the 1990s. In terms of the level of expenditure, measured as a share of the GDP, three groups of countries can be distinguished. The first group includes countries such as Denmark, the Netherlands and Belgium, which had a high level of expenditure in both active and passive policy measures during the 1980s. An intermediate group includes countries with a higher than average expenditure in active, but not in passive income support, such as Sweden and Italy, and countries with a higher than average expenditure in passive, but not active measures, such as

[1] OECD criteria split public spending on labour programmes into so-called “active and “passive” measures. The former aims at improving the employability of the unemployed by raising their job-related skills and the functioning of the labour market. We distinguish five groups of measures: (1) public employment services, (2) labour market training, (3) youth measures, (4) subsidized employment, (5) measures for the disabled. The latter are income transfers to unemployed, namely (1) unemployment benefits, and (2) early retirement pensions paid for labour market reasons (Martin and Grubb, 2001).

Spain. The last and largest group includes countries such as Japan, the USA, Austria, Portugal, Greece and Switzerland, with a very low level of expenditure in both active and passive measures.

From the ‘80s to the ‘90s, the policies in the three groups of countries have not changed. There has been a general reduction in expenses for passive measures, while a group of European countries -Spain, France, Germany and Finland- have substantially increased expenditure for active measures. Sweden, on the contrary, has reduced its percentage of ALMP.

Figure 3 shows that the hypothesis of a direct negative relation between ALMP expenditures and the unemployment rate is not verified. As a matter of fact, countries with a low percentage of ALMP/PIL, but also the countries that designate a higher proportion of the PIL to ALMP, have a lower unemployment rate. The highest unemployment rate occurs in the countries in an intermediate position.

Figure 1 Ratio of Active to Passive Expenditure for Employment over GDP (1985)

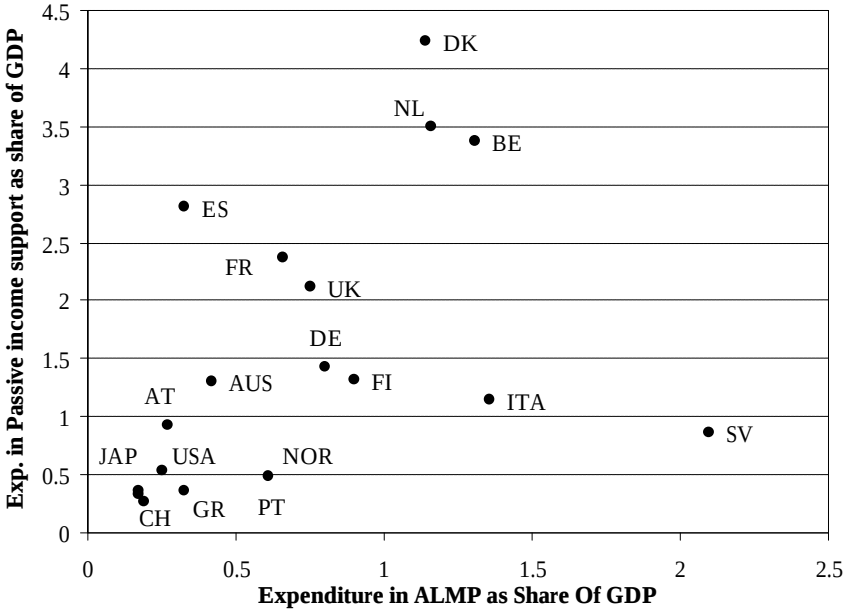
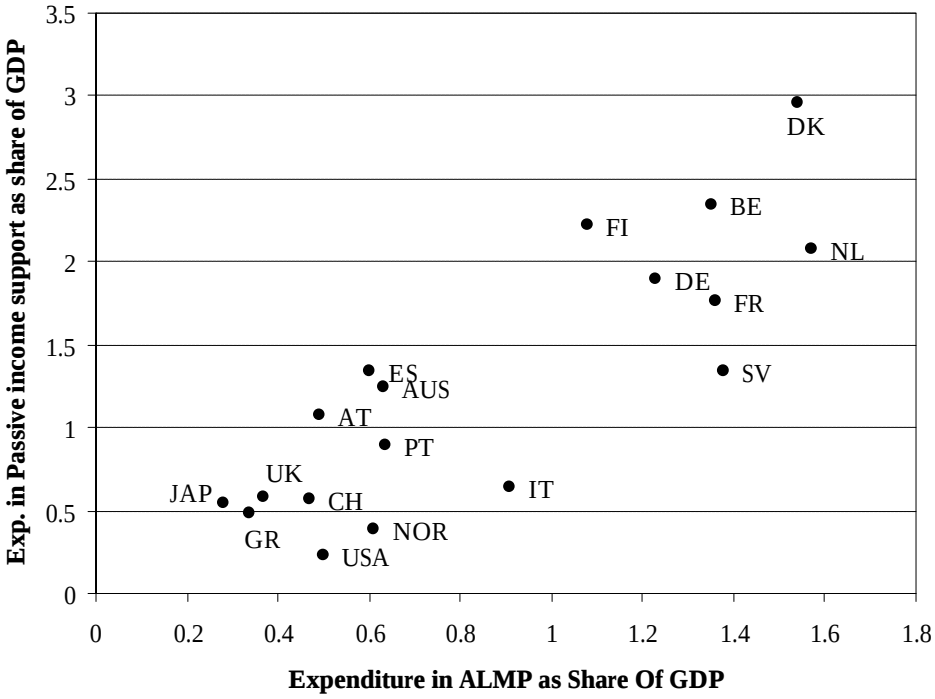
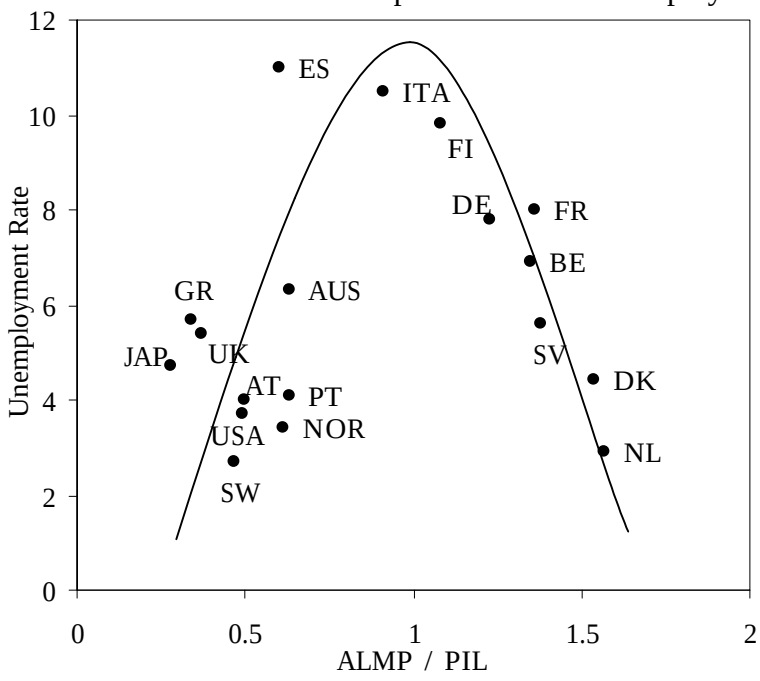


Figure 2 Ratio of Active to Passive Expenditure for Employment over GDP (2000)



Source: OECD, Employment Outlook, various issues

Figure 3 Relation between ALMP Expenditures and Unemployment Rate



3 THE EFFECTS OF ALMP

From a theoretical point of view the effects of ALMP can be studied by two models the conclusions of which are very similar: the well-known Jackman, Layard and Nickell labour

market framework, distinguishing between a wage-setting and a labour-demand relationship (Jackman, Layard and Nickel 1991; Calmfors 1994; Calmfors and Lang 1995) and the Beveridge Curve framework derived from a matching function combined with job search theory[2]. As stressed in Jackman, Pissarides and Savouri (1990), active labour policies significantly affect the position and slope of the Beveridge curve[3]. Indeed, more active than passive labour policies cause the Beveridge curve to shift to the origin of axis since they reduce labour market mismatches and search frictions. Moreover, ALMP make a given job creation programme more effective with regard to employment and they also cause flattering of the curve. Finally, the matching process is speeded up as obstacles are removed.

Calmfors, 1994 analyzes various effects of ALMP, distinguishing between: (i) effects on the matching process; (ii) effects on the competition for jobs; (iii) productivity effects; (iv) effects on the allocation of labour among sectors and geographic mobility; (v) direct crowding-out effects on regular labour demand; and (vi) accommodation effects on wage setting.

ALMP, particularly job-broking and counselling activities, make the matching process more efficient as they promote a more active search by the job seekers. In our model, the coefficient affected by this type of treatment effect is i.e. the fraction of active job seekers over total unemployed workers. As a matter of fact, the job searcher pool (S) is composed of unemployed (U) and ALMP participants (P), and we can write:

$$S = U + a'P$$

Where a' is an index of search intensity. If the search intensity of the ALMP participant to ALMP is greater ($a'>1$), it is clear that an increase of ALMP participation increases and, consequently, the matching process.

On the other hand, there may also be an opposite *locking in* effect if a' is <1, i.e. if participants do not find job opportunities before programmes are completed or continue to have a low probability of being employed after the programme[4].

Job-matching improvement makes the hiring process of firms easier and then lowers the cost of posting vacancies, as well as limiting wage settings. In our model, these effects can be synthesized by a reduction of the reservation wage and reservation productivity.

Reservation productivity and the reservation wage are also affected by the effects on competition for jobs and productivity effects. It is self evident that participation in ALMP (especially training programmes and job creation measures providing on-the-job training) increases the productivity of job searchers, even if their reservation wages increase also. The

[2] The theoretical foundations of the Beveridge Curve are substantially twofold: the first, starting from a model of Hansen, derives the matching function from an aggregation over distinct markets in the presence of frictions and of limited mobility of labour. The second refers to a model of matching in a stock-flow framework. For a recent review see Petrongolo and Pissarides, 2001.

[3] Jackman, Pissarides and Savouri, 1990, pag. 480.

[4] Caroleo and Pastore, 2004 have detected the existence of a "training trap" for unemployed youth in Italy in which participation in training programmes increases the probability of repeating this type of program without improving the probability of finding a job.

net effect is an empirical issue. Employment subsidies, instead, directly decrease labour costs for the firm. ALMP participation may also have a positive effect on labour force participation, increasing the motivation to actively seek for work and therefore increasing the competition for the available jobs (Johansson, 2001).

Finally, the desired effect of ALMP is to change the allocation of the work force between sectors, skills and regions (i.e. to reduce the degree of mismatch in our model). If there is full employment among skilled workers or in certain regions or sectors and wages are flexible, employment subsidies or training programmes that try to increase the probability of hiring unskilled workers or workers employed in regions with high unemployment and wage rigidity have a positive effect on output and employment.

Equally, a policy that tries to reallocate workers from unskilled to skilled jobs, from low productivity sectors to high productivity sectors or from low labour demand regions to high labour demand regions, also have a positive effect on gross output. As a consequence, if, for example, unskilled workers are retrained and become more skilled, the labour supply in the skilled sector augments and, if the wages become more flexible, labour demand augments to the same extent. On the other hand, the unskilled sector will be unaffected because of wage rigidity. (Layard, 1999; Calmfors, Forslund and Hemstòm 2002).

An unintentional side effect is that ALMP may crowd out (*displacement effect*) regular labour demand (especially corcerning to schemes of subsidized employment). In fact, a *deadweight effect* occurs when the same person would have been hired even in the absence of such subsidies and a *substitution effect* occurs when the subsidies lead employers to substitute one category of workers for another[5].

An indirect crowding-out effect can be found to the extent that ALMP improve the welfare of the unemployed: higher income rather than unemployment benefits for participants; a higher level of psychological well-being due to being employed; improvement in future labour market prospects; extension of income support beyond the maximum unemployment benefit period. In this case, the reservation wage is increased and the intensity of the job search is reduced. Wage pressure is increased.

4 A MACROECONOMIC EVALUATION OF ALMP IN ITALY

For these reasons, the net employment effect of ALMP is an empirical issue; thus, as the EES stressed, it is important to implement the monitoring and evaluation of these policies (Fay, 1996). However, while monitoring has now been established in Italy (MLSP, various

[5] The *displacement effect* can have a positive employment effect to the extent that the employment of the long-term unemployed (outsiders) crowds out the employment of insiders, so that the latter group meets more competition and moderates wage settings.

issues), evaluation has only been carried out so far according to the conventional programme-oriented approach to policy evaluation[6].

The empirical research on the effects of ALMP is of two types: microeconomic and macroeconomic. Microeconomic studies evaluate the effects of participation in ALMP for the participating individuals, comparing their labour market outcome to the outcome that would have prevailed had they not participated in an active program. Macroeconomic studies examine aggregate, general equilibrium effects. The question is whether ALMP represent a net gain for the whole economy. There are two alternatives to consider: ALMP positively affect both unemployment and output or the effect is simple distributional, i.e. if work is shifted from the old to the young or from a region to another, etc. (Bellmann and Jackman, 1996). These studies concern the evaluation of a Beveridge curve or a matching function, as well as a wage-setting function, the evaluation of the direct, crowding-out effect or the effects of ALMP on labour force participation (Hujer and Caliendo 2000).

The method chosen to evaluate ALMP in Italy is a reduced form that allows estimating the net effects of ALMP participation on employment or unemployment in a regional framework (Hujer, Blien, Caliendo and Zeiss, 2002). This type of methodology has been applied especially in the studies based on OECD data explaining the cross-country variation in unemployment rates by the cross-country variation in a number of labour market institutions; one of them is ALMP (Layard, Nickell and Jackman, 1991; Nickell, 1997; Scarpetta, 1996; Nickell and Layard, 1999; Blanchard and Wolfers, 2000)[7].

There are a lot of weaknesses which arise in a macroeconomic assessment of active labour market policies. As we work with aggregated data, the results tend to become vague and less robust. We have to deal in many cases with relatively crude data, making use of proxy variables when necessary. However, the major problem is that of endogeneity or simultaneity. Given that governments react to rising unemployment or other labour market problems with increased policy efforts, it becomes very hard to distinguish the effect of policy on the labour market. Basically, expenditures on ALMP can affect the unemployment rate, and it may be equally the case that the level of unemployment affects spending on ALMP.

Data based on the participation in active and passive labour policies was provided by the "Rapporto di Monitoraggio" of the MLPS, reconstructed on a yearly (monthly) basis from 1996 to 2002 and by regions. The main active policies are: a) Mixed cause contracts; b)

---

[6] For a comprehensive survey of the evaluation studies carried out in Italy, see Trivellato, Martini and Rettore, 2001.

[7] The main difference between studies based on OECD data and our methodology concerns the measure of ALMP. The former generally use the expenditure (as a percent of the GDP) on ALMP; we use the participants in programmes of active policies. The measure of ALMP, used in a large number of studies using OECD data is: $\gamma = b_r r / uy$ (see appendix in Calmfors, Forslund and Hemstrom 2002). r is the number of participants as a fraction of the labour force, u is the unemployment rate, y is the GDP per capita, br is the expenditure on ALMP per programme participant.

Consequently, the relation of the two measures is the following:

$r = \gamma u (b_r / y)^{-1}$

subsidies for long-term or short-term employment; c) incentives for the stabilization of short-term contracts, d) Incentives for self-employment. The main passive policies are: a) unemployment benefits and b) early retirement's pensions. In contrast to the OECD definition of ALMP, the "Rapporto di Monitoraggio" restricts analysis only to the measures for youth and employment subsidies. Recently, data has also been produced on training measures and on public employment services, but with no information on the time series.

Outcome variables are the labour market indices representing the main objectives of the European Employment Strategy: the employment rate, the total and the youth and female unemployment rate, the long-term unemployment rate.

The period refers to the years, 1996-2002 which corresponds to a considerable, positive cycle of increase in employment. If we compare this period with a similar, previous one (1985-1991), we can observe that an increase in employment occurred in spite of a relative stagnation in economic growth.

	1996-2002	1985-1991
Ä Employment rate	1,2%	1,0%
Employed per year	271.000	224.000
Ä PIL	+1,7%	+2,7%
Employment/PIL elasticity	0,70	0,38

There are several explanations for that positive cycle: the introduction of new, more flexible forms of labour contracts (atypical contracts), an increase of the employment of women and employment in the service sector and the concurrence of a period of wage moderation. Moreover, one of the major explanations is the objective of our research: the implementation of the European Employment Strategy (begun in 1998) and a renewed impulse to ALMP.

The following figures represent a broad measure of the relationship between the ALMP expenditures and the Passive Labour Market Policies (PLMP) expenditures made by the Italian regions. In this case, it can be noticed that, in the period from 1996 to 2002, there was a generalized reduction in the percentage of passive policies over PIL.

Figure 4 ALMP and PLMP as percentage of GDP - 1996

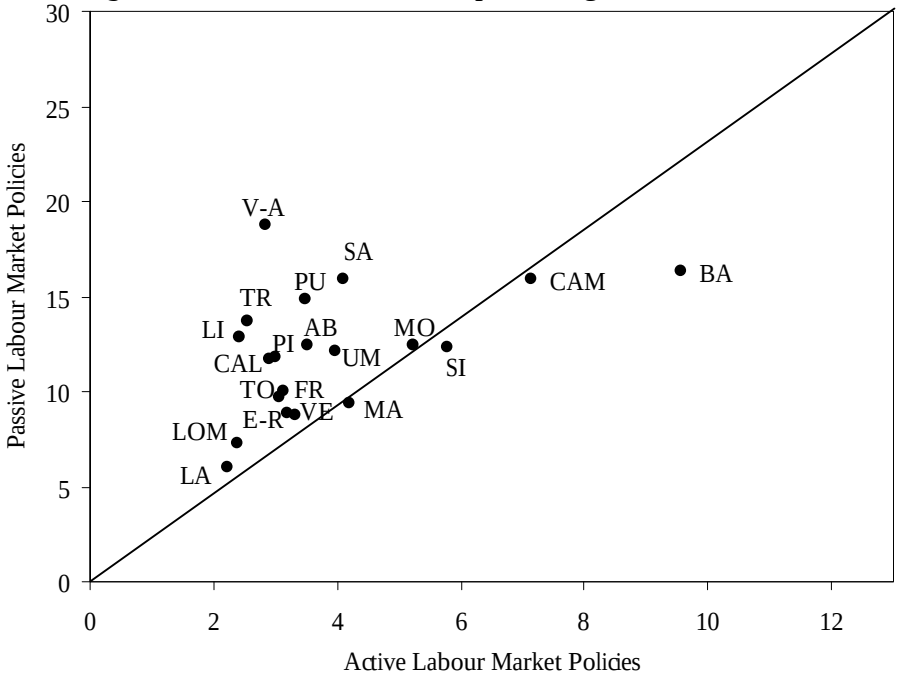
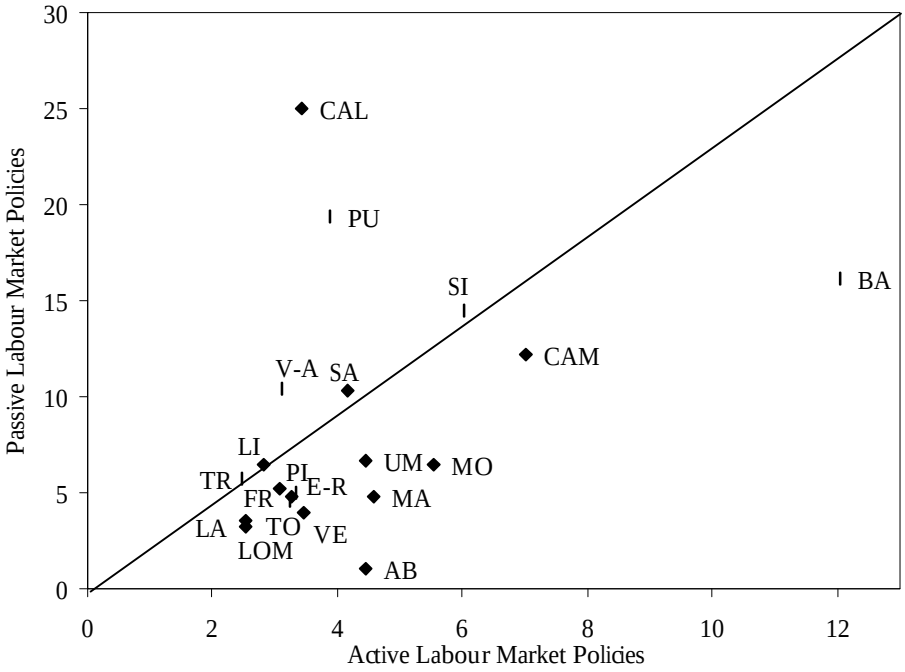


Figure 5 ALMP and PLMP as percentage of GDP - 2000



Source: MPLS, Rapporto di Monitoraggio various issues

5 EMPIRICAL MODELS OF LABOUR MARKET POLICIES

The empirical analysis is based on two econometric techniques thought to capture the possible effect that active and passive labour market policies might have on unemployment dynamics.

In particular, the aim of this empirical part consists of assessing whether ALMP could have different effects according to the particular region where the program has been implemented.
The study employs panel data models for the 20 Italian regions. Each model is estimated for several dependent variables including employment rate, unemployment rate, youth unemployment rate, long-term unemployment rate and female unemployment rate. The explicative variables are the unemployment rate, the female unemployment rate, the youth unemployment rate, the long-term unemployment rate and the employment rate. The independent variables are a set of active labour market policies and the total passive labour market policies. Moreover, some variables enter into the estimation as instruments. These variables are the GDP per-capita, the gross-fix investments, the GDP per-worker, the school-attendance rate and the weight of advanced services over total services.
The sample period goes from 1996 to 2002. The data used in the empirical analysis were drawn from Istat.
The significant difference between the Southern and the Northern Italian labour markets make it necessary to analyze both areas separately. The number of cross sections for Southern Italy are 8 and 11 for Northern Italy. Valle d'Aosta is not considered in the analysis.

6 THE ECONOMETRIC FRAMEWORKS

As stated above, the study implements different econometric techniques to analyze the afore-mentioned issues. There are two techniques used. The first refers to the Generalized Method of Moment (GMM). The second consists of applying the Vector Autoregression framework to panel data (P-VAR).

6.1 The GMM Model

The modern approach to the estimation of system instrumental variables is based on the principle of the generalized method of moment (GMM). In order to analyze the effects of ALMP on the unemployment rate, we estimate the following basic equation:

$$u_{i,t} = a\,u_{i,t-1} + g\,X_{it}^{A} + j\,X_{it}^{P} + \Theta B_{i,t} + D_{i,t} + h_{i,t} + e_{i,t} \qquad (16)$$

with
$i = 1,....,N$ and $t = 1,....,T$.
In the specified equation, X_{it}^{A} and X_{it}^{P} are two vectors of active and passive labour market policies, respectively, which are supposed to influence the dependent variable; Θ is a vector of structural variables; $D_{i,t}$ is a vector of time invariant region-specific effect; $h_{i,t}$ is a vector of region invariant time specific effect; and $e_{i,t}$ is an i.i.d. vector of disturbances. The

response coefficients g and j measure the effect that an increase of participants in active and passive labour market programs has on unemployment dynamics.

Time and region dummies are very important components of the specification. Time dummies may reduce the reverse causality problem if the timing of adverse shocks is correlated between regions. Region fixed effects capture all time-invariant institutional and economic characteristics explaining why one region has a different-from-average unemployment rate.

The importance of these region-specific effects cannot be minimized. For example, since the mid-1990s, Abruzzo has spent, on the average, a lower percentage of the GDP on ALMP than Campania (4 percent for Abruzzo and 7 percent for Campania), yet Abruzzo had a higher business-sector employment rate in the sample period (35 percent compared to 26 percent for Campania). If only variables capturing institutional effects (which, in general, are not very precise) were used to control for region-specific effects, part of the differences in employment caused by other institutional factors would be wrongly attributed to ALMP spending.

The specification in equation (16) forms a dynamic panel data model, where the dependent variable is partly explained by its past value.

The specified dynamic panel data model has been estimated by using three alternative methods. Table 1 reports the GMM estimator in first differences (GMM-DIF), the system estimator (GMM-SYS), and the OLS results.

Table 1 GMM Estimates of the Unemployment Rate

South	GMM-DIF		GMM-SYS		OLS	
	Coeff.	Std.Error	Coeff.	Std.Error	Coeff.	Std.Error
Unemployment (t-1)	0.28	[0.08]	0.38	[0.18]	0.34	[0.08]
ALMP (t)	-0.69	[0.24]	-0.74	[0.21]	-0.62	[0.12]
ALMP (t-1)	0.32	[0.18]	-0.59	[0.14]	-0.84	[0.23]
PLMP (t)	-0.88	[0.27]	-0.18	[0.07]	-0.83	[0.73]
PLMP (t-1)	0.50	[0.04]	0.39	[0.13]	0.11	[0.20]
	Statistic	p-value	Statistic	p-value		
Wald Test of Joint Significance	732.8	[0.000]	126.4	[0.000]		
Wald Test of Dummies Significance	4725	[0.000]	130.9	[0.000]		
Sargan Test	12.72	[0.980]	56.47	[0.021]		
First-order serial correlation	-2.314	[0.021]	-0.8793	[0.379]		
Second-order serial correlation	-1.328	[0.184]	-1.333	[0.183]		

North	GMM-DIF		GMM-SYS		OLS	
	Coeff.	Std.Error	Coeff.	Std.Error	Coeff.	Std.Error
Unemployment (t-1)	0.10	[0.15]	0.12	[0.16]	0.15	[0.07]
ALMP (t)	-0.52	[0.26]	-0.47	[0.29]	-0.50	[0.30]
ALMP (t-1)	0.29	[0.45]	-0.10	[0.25]	0.07	[0.30]
PLMP (t)	-0.68	[0.17]	-0.05	[0.16]	-0.51	[0.19]
PLMP (t-1)	0.02	[0.24]	0.13	[0.17]	0.20	[0.19]
	Statistic	p-value	Statistic	p-value		
Wald Test of Joint Significance	1130	[0.000]	1435	[0.000]		
Wald Test of Dummies Significance	2491	[0.000]	641	[0.000]		
Sargan Test	21.67	[0.655]	74.14	[0.000]		
First-order serial correlation	-1.59	[0.112]	-1.82	[0.070]		
Second-order serial correlation	-0.52	[0.603]	1.53	[0.125]		

From Table 1 we can see that in the southern regions, an increase in ALMP produces a larger response in terms of unemployment reaction with a decrease of 69 basis points in the GMM-DIF model. In the North, the response is much smaller. An increase of one percent in ALMP induces a fall in the unemployment rate of 52 basis points.

We now concentrate on the relative ability of alternative active policies to affect the unemployment rate, the long-term unemployment rate, the employment rate, the youth unemployment rate and the female unemployment rate.

The two policies we consider are the mixed cause contracts (henceforth, ALMP2) and the sum of the subsidies for long-term or short-term hiring, the incentives for the stabilization of short-term contracts and the incentives for self-employment (ALMP1).

Table 2 shows the ability of the two active policies to reduce the unemployment rate in the South and in the North.

Table 2 GMM Estimates of the Total Unemployment Rate

South	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Unemployment (t-1)	0.59	[0.21]	0.75	[0.19]
ALMP1 (t)	-0.61	[0.24]	-0.69	[0.89]
ALMP1 (t-1)	0.27	[0.17]	-0.03	[0.73]
ALMP2 (t)	-0.36	[0.16]	-0.17	[0.79]
ALMP2 (t-1)	0.28	[0.61]	-0.44	[0.84]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	57.5	[0.000]	847.5	[0.000]
Wald Test (Dummies Sign.)	1151.0	[0.000]	24430.0	[0.000]
Sargan Test	15.6	[0.927]	56.5	[0.021]
First-order serial correlation	-1.7	[0.098]	-1.8	[0.076]
Second-order serial correlation	-1.8	[0.078]	-1.4	[0.147]

North	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Unemployment (t-1)	0.17	[0.07]	0.23	[0.08]
ALMP1 (t)	-0.26	[0.07]	-0.27	[0.05]
ALMP1 (t-1)	0.12	[0.09]	0.04	[0.66]
ALMP2 (t)	-0.76	[0.18]	-0.85	[0.19]
ALMP2 (t-1)	-0.16	[0.16]	0.12	[0.03]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	1325.0	[0.000]	507.2	[0.000]
Wald Test (Dummies Sign.)	4535.0	[0.000]	157.2	[0.000]
Sargan Test	17.0	[0.881]	61.8	[0.006]
First-order serial correlation	-1.5	[0.142]	-1.9	[0.061]
Second-order serial correlation	0.1	[0.922]	1.3	[0.190]

The results suggest that while ALMP1 is more effective in the South (-0.61) than in the North (-0.26), an increase in the mixed cause contracts (ALMP2) produces a larger decrease in the northern unemployment (-0.76) with respect to the fall in the southern unemployment rate (-

0.36). Table 3 presents the results of the GMM estimates for the model in which the employment rate is considered the dependent variable.

Table 3 GMM Estimates of the Employment Rate

South	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Employment (t-1)	-0.15	[0.09]	-0.18	[0.08]
ALMP1 (t)	0.43	[0.21]	0.48	[0.22]
ALMP1 (t-1)	-0.16	[0.14]	-0.07	[0.17]
ALMP2 (t)	0.58	[0.15]	0.75	[0.21]
ALMP2 (t-1)	0.04	[0.01]	0.89	[0.28]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	275.5	[0.000]	179.3	[0.000]
Wald Test (Dummies Sign.)	32890	[0.000]	1970	[0.000]
Sargan Test	76.09	[0.000]	18.95	[0.800]
First-order serial correlation	-2.041	[0.041]	-1.759	[0.079]
Second-order serial correlation	-1.832	[0.067]	-1.445	[0.148]

North	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Employment (t-1)	-0.42	[0.09]	0.69	[0.03]
ALMP1 (t)	0.15	[0.14]	0.18	[0.13]
ALMP1 (t-1)	0.14	[0.07]	0.05	[0.15]
ALMP2 (t)	0.76	[0.06]	0.77	[0.05]
ALMP2 (t-1)	0.27	[0.19]	-0.06	[0.03]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	1386.0	[0.000]	4514.0	[0.000]
Wald Test (Dummies Sign.)	1837.0	[0.000]	800.0	[0.000]
Sargan Test	28.2	[0.297]	115.8	[0.000]
First-order serial correlation	0.2	[0.858]	-2.6	[0.009]
Second-order serial correlation	-1.7	[0.084]	1.0	[0.300]

Also in this case, a rise of 1% in the mixed caused contracts (ALMP2) induces a larger increase in the northern employment rate (0.76) than in Southern employment (0.58). The opposite is true for the other active policy we considered. In the South, an increase in ALMP1 lead to a rise in the employment rate of 0.43%, while in the North the effect is of an increase of 0.15%.

Table 4 reports the GMM estimates for the model where the dependent variable is the long-term unemployment rate. The evidence coming from Table 4 corroborates the finding shown for the unemployment rate model. In fact, the coefficients for the selected policy are both negative. However, it seems that while ALMP1 exerts a greater effect in the South, ALMP2 is more efficient in the North. This is also true when we consider the ability of the policy in reducing the youth unemployment rate.

In fact, Table 5 suggests a higher ALMP1 coefficient for the South as well as a higher ALMP2 coefficient for the South.

Table 4 GMM Estimates of the Long-term Unemployment Rate

South	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Long-Term Unemployment (t-1)	0.62	[0.10]	0.79	[0.11]
ALMP1 (t)	-0.68	[0.04]	-0.63	[0.07]
ALMP1 (t-1)	0.27	[0.17]	0.07	[0.41]
ALMP2 (t)	-0.23	[0.03]	-0.31	[0.06]
ALMP2 (t-1)	-0.06	[0.55]	0.01	[0.15]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	132.5	[0.000]	695.2	[0.000]
Wald Test (Dummies Sign.)	1021	[0.000]	12970	[0.000]
Sargan Test	16.97	[0.883]	61.53	[0.007]
First-order serial correlation	-1.987	[0.047]	-2.352	[0.019]
Second-order serial correlation	-1.207	[0.228]	-0.7947	[0.427]

North	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Long-Term Unemployment (t-1)	0.16	[0.26]	0.13	[0.11]
ALMP1 (t)	-0.24	[0.04]	-0.37	[0.06]
ALMP1 (t-1)	-0.20	[0.15]	-0.37	[0.63]
ALMP2 (t)	-0.71	[0.06]	-0.42	[0.12]
ALMP2 (t-1)	0.14	[0.08]	0.84	[0.93]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	993.7	[0.000]	893.2	[0.000]
Wald Test (Dummies Sign.)	1593.7	[0.000]	5525.0	[0.000]
Sargan Test	22.7	[0.598]	80.7	[0.000]
First-order serial correlation	-1.3	[0.196]	-1.5	[0.139]
Second-order serial correlation	-1.4	[0.151]	0.6	[0.574]

Table 5 GMM Estimates of the Youth Unemployment Rate

South	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Youth Unemployment (t-1)	0.85	[0.14]	0.85	[0.15]
ALMP1 (t)	-0.65	[0.36]	0.56	[0.22]
ALMP1 (t-1)	0.52	[0.07]	-0.13	[0.23]
ALMP2 (t)	-0.64	[0.14]	-0.78	[0.12]
ALMP2 (t-1)	0.38	[0.40]	0.19	[0.09]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	2206	[0.000]	579.6	[0.000]
Wald Test (Dummies Sign.)	388	[0.000]	13990	[0.000]
Sargan Test	16.33	[0.905]	65.9	[0.002]
First-order serial correlation	-1.923	[0.054]	-1.951	[0.051]
Second-order serial correlation	-1.58	[0.114]	0.1764	[0.860]

North	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Youth Unemployment (t-1)	-0.12	[0.18]	0.18	[0.09]
ALMP1 (t)	-0.39	[2.11]	-0.47	[0.28]
ALMP1 (t-1)	0.09	[2.34]	-0.10	[0.01]
ALMP2 (t)	-0.56	[3.57]	-0.67	[0.25]
ALMP2 (t-1)	0.19	[3.93]	0.28	[0.45]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	32.4	[0.000]	350.0	[0.000]
Wald Test (Dummies Sign.)	5056.0	[0.000]	283.7	[0.000]
Sargan Test	23.3	[0.561]	61.5	[0.007]
First-order serial correlation	-2.3	[0.024]	-2.6	[0.009]
Second-order serial correlation	-1.0	[0.314]	0.8	[0.451]

Finally, we look at the ability of the two active policy indicators to reduce the female unemployment rate.

Table 6 GMM Estimates of the Female Unemployment Rate

South	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Female Unemployment (t-1)	0.22	[0.17]	0.53	[0.15]
ALMP1 (t)	-0.57	[0.10]	-0.69	[0.20]
ALMP1 (t-1)	0.09	[0.03]	-0.23	[0.93]
ALMP2 (t)	-0.68	[0.24]	-0.65	[0.16]
ALMP2 (t-1)	-0.20	[0.27]	0.06	[0.13]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	624.9	[0.000]	1757	[0.000]
Wald Test (Dummies Sign.)	4510	[0.000]	24320	[0.000]
Sargan Test	8.022	[0.995]	48.72	[0.049]
First-order serial correlation	-1.765	[0.078]	-2.134	[0.033]
Second-order serial correlation	-1.232	[0.218]	0.4258	[0.670]

North	GMM-DIF		GMM-SYS	
	Coeff.	Std.Error	Coeff.	Std.Error
Female Unemployment (t-1)	-0.03	[0.17]	0.63	[0.08]
ALMP1 (t)	-0.88	[0.07]	-0.63	[0.14]
ALMP1 (t-1)	0.29	[0.18]	0.04	[0.16]
ALMP2 (t)	-0.16	[0.05]	-0.32	[0.16]
ALMP2 (t-1)	-0.08	[0.25]	0.15	[0.05]
	Statistic	p-value	Statistic	p-value
Wald Test (Joint Sign.)	277.3	[0.000]	18.4	[0.005]
Wald Test (Dummies Sign.)	3683.0	[0.000]	59500.0	[0.000]
Sargan Test	60.1	[0.004]	12.8	[0.914]
First-order serial correlation	1.3	[0.200]	-1.4	[0.166]
Second-order serial correlation	-0.6	[0.560]	-2.8	[0.006]

In general, the active and passive labour policy response coefficients for the Southern regions are larger than the ones obtained for the Northern regions.
The specific region effects indicate major differences among the regions due to idiosyncratic effects uncorrelated with the regressors.

6.2 Panel Vector Autoregression (P-VAR)

There has been a growing interest in using panel VAR models for applied labour policy analysis. Problems concerning the evaluation of the effect of regional policies are naturally studied in this framework. Vector autoregression (VAR) models are widely used in econometric studies in a broad variety of fields. The extension to panel data represents an interesting challenge due to the possible presence of cross-sectional heterogeneity.

Let us consider a panel VAR model with fixed time dimension T and derive asymptotic properties of a proposed estimation method with respect to the cross-sectional dimension N.
In particular, we estimate a first order VAR using a bivariate system of the unemployment rate and active labour market policy. We start from a panel structural dynamic linear model of the form:

$$\begin{aligned} u_{i,t} &= b_{i,10} - b_{12} ALMP_{i,t} + d_{11} u_{i,t-1} + d_{12} ALMP_{i,t-1} + e^{u}_{i,t} \\ ALMP_{i,t} &= b_{i,20} - b_{21} u_{i,t} + d_{21} ALMP_{i,t-1} + d_{22} u_{i,t-1} + e^{ALMP}_{i,t} \end{aligned} \quad (1)$$

where u_t is the unemployment rate and $ALMP_t$ is the active labour market policy rate as constructed above. In the specified model, both u_t and $ALMP_t$ are assumed to be stationary; e^{u}_{t} and e^{ALMP}_{t} are white noise disturbances. The structure of this system incorporates feedback relationship between u_t and $ALMP_t$. This means that the two variables are allowed to affect each other contemporaneously.
The identification problem is solved by restricting the contemporaneous relation matrix to a lower triangular form. This solution imposes a recursive structure on the economy, resulting in a particular causal ordering of the variables in the system. In particular, we impose the restriction of $b_{12} = 0$, so that the structural model can now be written in matrix form as[8]:

$$\begin{bmatrix} 1 & 0 \\ b_{21} & 1 \end{bmatrix} \begin{bmatrix} u_{i,t} \\ ALMP_{i,t} \end{bmatrix} = \begin{bmatrix} b_{i,10} \\ b_{i,20} \end{bmatrix} + \begin{bmatrix} d_{11} & d_{12} \\ d_{21} & d_{22} \end{bmatrix} \begin{bmatrix} u_{i,t-1} \\ ALMP_{i,t-1} \end{bmatrix} + \begin{bmatrix} e^{u}_{i,t} \\ e^{ALMP}_{i,t} \end{bmatrix} \quad (2)$$

or

$$\mathrm{B} z_t = \Lambda_0 + \Lambda_1 z_{t-1} + e_t \quad (3)$$

Where $\mathrm{B} = \begin{bmatrix} 1 & 0 \\ b_{21} & 1 \end{bmatrix}$, $z_t = \begin{bmatrix} u_{it} \\ ALMP_{it} \end{bmatrix}$, $\Lambda_0 = \begin{bmatrix} b_{i,10} \\ b_{i,20} \end{bmatrix}$, $\Lambda_1 = \begin{bmatrix} d_{11} & d_{12} \\ d_{21} & d_{22} \end{bmatrix}$, and $e_t = \begin{bmatrix} e^{u}_{i,t} \\ e^{ALMP}_{i,t} \end{bmatrix}$

where z_{it} is the vector of endogenous variables; Λ_1 is a 2×2 matrix of feedback coefficients; finally, e_t is a vector of disturbances terms. The region fixed effects, i.e. the vector Λ_0, account for institutional differences as well as other region-specific unobserved influences on unemployment. This means that the system allows for different region-specific constant terms in each equation, since some regions may have a higher average unemployment rate and active labour policy than others, for reasons that are not captured by the explanatory variables. Moreover, the model considers one lag for each right-hand side variable, to allow for feedback effects from labour policy to unemployment rate. In this form, the model allows for a simultaneous feedback from policy variables to macroeconomic variables but not vice versa.

---

[8] To avoid the identification problem, restrictions have to be imposed on equation (2). Equation (1) cannot be estimated directly because of feedback relationship (i.e. To simultaneously solve for b_{10}, b_{12}, b_{20}, d_{11}, d_{12}, d_{21}, d_{22}, s_u^2, and s_{ALMP}^2, the nine parameter a_{10}, a_{11}, a_{12}, a_{20}, a_{21}, a_{22}, $\mathrm{Var}(e^{ALMP}_{i,t})$, $\mathrm{Var}(e^{u}_{i,t})$, and $\mathrm{Cov}(e^{u}_{i,t}, e^{ALMP}_{i,t})$, in equation (5) has to estimate by using OLS).

The assumption ($b_{12} = 0$) means that $ALMP_t$ does not have a contemporaneous effect on u_t. In other words, both e_t^u and e_t^{ALMP} shocks effect the contemporaneous value of $ALMP_t$, but only e_t^u shocks affect the contemporaneous value of u_t. The timing of the model can be summarized as follows: a shock to labour policy instruments ALMP in period *t* affects the unemployment rate at time *t+1*. In fact, at time *t* the unemployment rate is predetermined, so it cannot be influenced by any policy instrument. For example, an increase in active labour policy leads to a rise in labour force participation, thereby facilitating a decrease in the unemployment rate.

Premultiplying by B^{-1} both sides of equation (3), the standard form of a VAR model is as follows:

$$z_t = \mathrm{A}_0 + \mathrm{A}_1 z_{t-1} + e_t \quad (4)$$

where

$\mathrm{A}_0 = \mathrm{B}^{-1}\Lambda_0$, $\mathrm{A}_1 = \mathrm{B}^{-1}\Lambda_1$, and $e_t = \mathrm{B}^{-1}e_t$

In case of the two variable system, the equation (4) can be re-written in matrix form as follows:

$$\begin{bmatrix} u_{i,t} \\ ALMP_{i,t} \end{bmatrix} = \begin{bmatrix} a_{i,10} \\ a_{i,20} \end{bmatrix} + \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \begin{bmatrix} u_{i,t-1} \\ ALMP_{i,t-1} \end{bmatrix} + \begin{bmatrix} e_{i,t}^u \\ e_{i,t}^{ALMP} \end{bmatrix} \quad (5)$$

where

$a_{10} = b_{10}b_{21} - b_{20}$, $a_{20} = b_{10}$, $a_{11} = d_{11}$, $a_{12} = d_{12}$,

$a_{21} = d_{11}b_{21} - d_{21}$, $a_{22} = d_{12}b_{12} - d_{22}$, $e_{i,t}^u = e_{i,t}^u$,

$e_{i,t}^{ALMP} = b_{21}e_{i,t}^u - e_{i,t}^{ALMP}$

The estimated equations are presented in Table 7. Coefficient standard errors are given in square brackets. For each equation, the tables also provide the R^2 and the Durbin-Watson statistics (DW).

Table 7 P-VAR Estimates

Unemployment Rate

		South			North	
	Variable	Coeff	Std Error	Variable	Coeff	Std Error
1	Unemployment (t-1)	0.80	[0.24]	1 Unemployment (t-1)	0.48	[0.13]
2	ALMP (t-1)	-0.36	[0.15]	2 ALMP (t-1)	-0.21	[0.11]
3	Abruzzo	8.22	[1.84]	3 Emilia-Romagna	0.73	[0.27]
4	Basilicata	19.58	[3.15]	4 Friuli-Venezia-Giulia	1.01	[0.37]
5	Calabria	17.70	[6.07]	5 Lazio	4.47	[1.45]
6	Campania	16.22	[5.03]	6 Liguria	3.05	[1.23]
7	Molise	12.65	[3.40]	7 Lombardia	0.95	[0.37]
8	Puglia	12.54	[4.16]	8 Marche	1.26	[0.28]
9	Sardegna	14.98	[3.13]	9 Piemonte	2.16	[0.92]
10	Sicilia	16.36	[5.77]	10 Toscana	1.84	[0.92]
11	T98	1.36	[0.58]	11 Trentino Alto Adige	0.11	[0.54]
				12 Umbria	1.85	[1.02]
				13 Veneto	0.56	[0.26]
				14 T98	1.60	[0.47]
	R^2		0.82			
	Durbin-Watson Statistic		2.07			

ALMP

		South			North	
	Variable	Coeff	Std Error	Variable	Coeff	Std Error
1	Unemployment (t-1)	0.35	[0.12]	1 Unemployment (t-1)	0.10	[0.02]
2	ALMP(t-1)	0.65	[0.29]	2 ALMP(t-1)	0.39	[0.13]
3	Abruzzo	-1.68	[0.27]	3 Emilia-Romagna	-5.89	[0.99]
4	Basilicata	-3.61	[1.83]	4 Friuli-Venezia-Giulia	-5.19	[1.07]
5	Calabria	-7.98	[3.30]	5 Lazio	-4.22	[2.08]
6	Campania	-7.53	[2.03]	6 Liguria	-4.16	[1.76]
7	Molise	-3.92	[1.56]	7 Lombardia	-4.42	[0.95]
8	Puglia	-5.39	[1.89]	8 Marche	-6.37	[1.16]
9	Sardegna	-6.04	[2.39]	9 Piemonte	-3.38	[1.32]
10	Sicilia	-7.36	[3.00]	10 Toscana	-5.26	[1.32]
11	T98	0.37	[0.46]	11 Trentino Alto Adige	-4.60	[0.78]
				12 Umbria	-5.97	[1.47]
				13 Veneto	-5.46	[0.93]
				14 T98	0.15	[0.06]
	R^2		0.81		0.73	
	Durbin-Watson Statistic		2.05		1.99	

For our purposes, the key coefficients in Table 7 are the parameter of ALMP in the unemployment rate equation and the coefficients of lagged unemployment which represent the inertia of the unemployment process. At first glance, the model seems to perform rather well. Almost all coefficients are significant at the 5% level. The DW tests give evidence of the absence of serial correlation. The effect of a 1% increase in ALMP produces a fall in the unemployment rate of 36 basis points in the South. By contrast, if we increase ALMP in the North, we only get a 21 basis point reduction in the unemployment rate. The table also

suggests that unemployment is much more persistent in the South than in the North. The coefficient on lagged unemployment is 0.8 in the South and 0.48 in the North.

6.3 Results of Impulse-Response Analysis

In this section we present the estimated dynamic effects of active labour policy shocks on unemployment. In particular, we examine the similarity of the unemployment responses in each area. This is accomplished by using impulse response functions with a structural decomposition of the variance covariance matrix explained above. A 20-quarter horizon is considered.

The estimated responses to a 1% increase in unemployment and ALMP are reported in Figures 6 and 7. Each response is provided with the associated asymptotic confidence bands.

The impulse responses for the southern regions are significantly larger than those for the northern regions. The patterns of the responses are qualitatively similar in the two areas. Importantly, the results also suggest that the unemployment rate in the selected regions responds to identical labour policy shocks with different speeds and movements, as well as with different dimensions of the effects.

In fact, a positive ALMP shock decreases unemployment. Moreover, after an initial delay, the response function shows a hump-shaped pattern that reaches the maximum decline after roughly two years in the North and three years in the South.

The different adjustment speeds of the unemployment rates to ALMP shocks for the two selected areas can be partly explained by the existence of a higher degree of labour market rigidities in the South. This finding suggests the need for an improvement in the 'efficiency' of the labour market functioning.

On the other hand, the different dimensions of the effect can be explained by considering the existing differences both in the number of vacancies and in the unemployed of the two areas. While the northern regions are characterized by a large number of vacancies and a small number of unemployed (the upper part of the Beveridge curve), in the southern regions there are a small number of vacancies and a large number of unemployed (the lower part of the Beveridge curve). It follows that an identical increase in ALMP has a larger effect on the southern unemployment rate.

Figure 6 Impulse-Response Analysis for the South

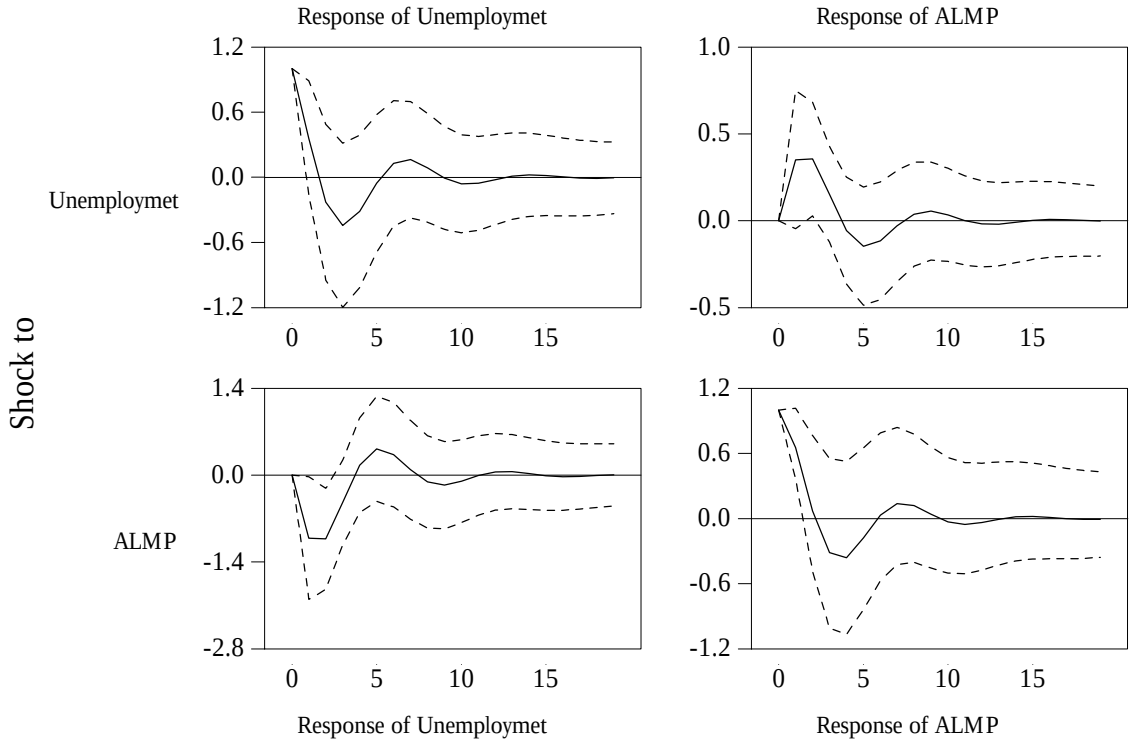
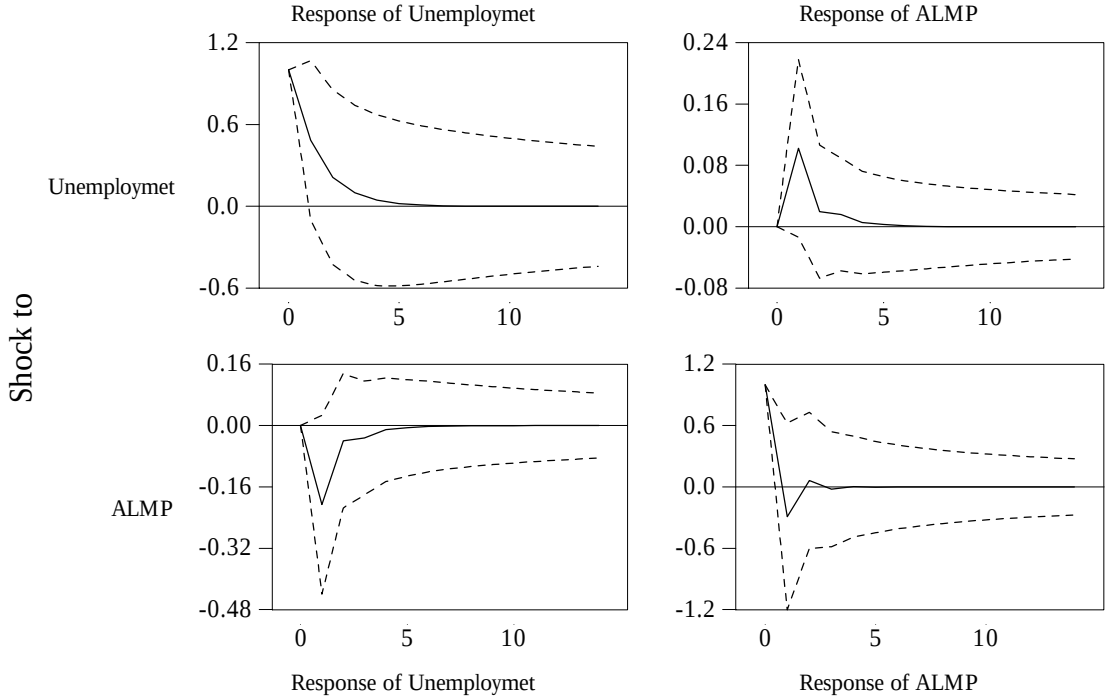


Figure 7 Impulse-Response Analysis for the North



The average response and the maximum impact of a contractionary labour policy shock are shown in Table 8.

Table 8 Estimated Response Function Features

Estimated Response of Unemployment to ALMP shock		
	South	North
Maximum Impact	-1.03	-0.21
Average Impact	-0.09	-0.02
Cumulated Effect	-1.76	-0.30
Time to Maximum	3	2
Time to die out	11	6

Estimated Response of ALMP to Unemployment shock		
	South	North
Maximum Impact	0.36	0.10
Average Impact	0.031	0.007
Cumulated Effect	0.61	0.15
Time to Maximum	3	2
Time to die out	11	6

Table 8 outlines some key characteristics of the estimated response functions. In particular, the table gives information about the maximum impact, the average responses and the cumulated effect of each structural shock. The table also considers the time that a shock takes to exert its maximum effect as well as the time to die out.

Despite some qualitative similarities, the table seems to suggest a different quantitative response across regions.

In both areas, an ALMP shock produces a decline in the unemployment rate. However, the dimension of the effect is quite dissimilar. While in the South the unemployment rate decreases by more than one percent, an ALMP shock in the North only reduces the unemployment rate by 21 basis points. The maximum impact on ALMP is observed in the southern regions. These regions also share the largest average unemployment response.

In the Northern regions, the effect of a given policy shock reaches its maximum effect earlier than in the South. It means that in the Northern regions, the unemployment rate appears to be more sensitive to labour policy shocks. Finally, concerning the time the shock takes to die out, a structural shock lasts longer in southern regions. This means that the degree of persistence of an adverse shock is higher in the South than in the North.

Asymmetries are also detected in the response of ALMP to an exogenous unemployment shock. This response can be interpreted as the speed of the policymakers in reacting to an increase in unemployment. Again, the largest responses are observed in the South; in particular, the response of ALMP in the southern regions reaches a maximum of thirty-six basis points after three years, while the reaction of the Northern Italian regions is quicker and smaller: ten basis points after almost two years.

7 CONCLUSIONS

The paper dealt with the theoretical and the empirical measurement of the of the ALMP ability to reduce regional unemployment.

The relevance of the issues is related to the possible asymmetries the differences in the economic structure of the Italian regions may arise concerning the effectiveness of alternative labour market programs.

The econometric methodologies implemented were the Generalized Method of Moment (GMM) and the Panel Vector Autoregression (P-VAR).

Each model were estimated for several dependent variables including employment rate, unemployment rate, youth unemployment rate, long term unemployment rate and female unemployment rate.

The evidence emerging from these models suggested that the effects of ALMP on unemployment are not similar across the Italian regions. Some programs are likely to exert a greater effect in the South than in the North.

The impulse-response analysis highlighted the presence of divergences across the Italian regions. Importantly, the results also suggest that the unemployment rate in the selected regions responds to identical labour policy shocks with different speeds and movement, as well as with different dimensions of the effects.

REFERENCES

Bellmann L., Jackman R. (1996) "Aggregate Impact Analysis" in *International Handbook of Labour Market Policy and Evaluation* ed. by Schmid G., O'Relly J. and Schomann K., pp. 143-162. Edward Elgar, London.

Christl J. (1992), *The Unemployment/Vacancy Curve: Theoretical Foundation and Empitical* Relevance, Physica Verlag, Heidelberg.

Fay R.G. (1996) "Enhancing the Effectiveness of Active Labour Market Policies: Evidence from Programme Evaluations in OECD Countries", *Labour Market and Social Policy Occasional Papers*, 111, OCDE.

Heckman J. La Londe R. Smith J. (1999) "The Economics and Econometrics of Active Labor Market Programs" in *Handbook of Labor Economics*, Vol. III ad by Ashenfelter O., Card D. pp. 1865-2097, Elsevier, Amsterdam.

Jackman R., Pissarides C., Savouri S, (1990), "Labour Market Policies and Unemployment in the OECD", *Economic Policy*, 5, 450-490.

Hujer R., Caliendo M. (2000) "Evaluation of Active Labour Market Policy: Methodological Concepts and Empirical Estimates", IZA Discussion Paper, n. 236, dec.

Layard R., Nickell S., Jackman R. (1991), *Unemployment: Macroeconomic Performance and the Labour Market,* Oxford University Press, Oxford.

Martin J.P., Grubb D. (2001), "What Works and for Whom: A Review of OECD Countries' Experiences with Active Labour Market Policies", *OECD Working Paper*, September.

Petrongolo B., Pissarides C.A. (2001), "Looking Into the Black Box: A Survey of the Matching Function", *Journal of Economic Literature*, n. 39, June, 390-441.

Trivellato U., Rettore E., Martini A. (2002) "La valutazione delle politiche del lavoro in presenza di selezione: migliorare la teoria, i metodi o i dati?", Progetto MIUR '*Dinamiche e persistenze nel mercato del lavoro italiano ed effetti di politiche*', *Working Paper* n. 45, Dipartimento di Scienze Statistiche, Università di Padova, Padova.

OECD (1994), *The OECD Jobs Study*, Paris.

OECD (1996), *The OECD Jobs Strategy: Enhancing the Effectiveness of Active Labour Market*

COMMISSION OF THE EUROPEAN COMMUNITIES (2003), "The future of the European Employment Strategy (EES) "A strategy for full employment and better jobs for all", COM(2003) 6 final, Brussels.