The efficiency analysis applied for the evaluation of labour market policies: Study case for Romania

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Abstract:

The transition to a market economy started in Romania after 1989 and had significant repercussions on labor market outcomes, in terms of both levels and composition. Labor markets adjusted to the new economic environment by reducing employment and labor force participation, and by increasing unemployment to rates unseen in Romania. The Romanian government soon recognized the urgency of developing social safety programs and labour market programs to help the unemployed during this transition period, but only in the late 1990s a coherent and a large scale program was launched.

Since there are important financial resources allotted to this type of spending, it is necessary to evaluate the social benefit they bring. Despite the great interest of this topic, both for scientists and for politicians, there are quite a few studies on Romanian labour market policies. One of the reasons is the unavailability of data and the lack of surveys on labour market policies.

The purpose of the paper is to evaluate the efficiency of some public policy measures in Romania, in time periods 2004 and 2005, and thus, to contribute to a better knowledge of Romanian labor market.

We present the existing labour market policies in Romania and we focus on the most significant ten interventions. The efficiency analysis is performed using data envelopment analysis (DEA method), that has proven useful in a diverse variety of applications. Due to the rather small number of observed units, we use a small number of inputs and outputs. The inputs are the expenditure and the number of participants registered for each measures. As output we use the percentage of exits to employment in the total number of exits. We conduct the analysis for each year and we use Malmquist index numbers for evaluating the changes in efficiency of LMP in 2005 compared to 2004.

The results emphasize that in both years the active measures were more efficient than the passive ones and the Completion of employees’ incomes (I11) was on the efficiency frontier, along with Vocational training (I7).

Unemployment indemnity (I2), the measure with the highest value of expenditure, was half efficient compared to those situated on efficiency frontier.

JEL CODES: J64, J65, J68, P27
Key words: labour market policy, DEA, efficiency, Transition economy, Romania
Introduction

The transition to a market economy started in Romania after 1989 and had significant repercussions on labor market outcomes, in terms of both levels and composition. Labor markets adjusted to the new economic environment by reducing employment and labor force participation, and by increasing unemployment to rates unseen in Romania. The Romanian government soon recognized the urgency of developing social safety programs and labor market programs to help the unemployed during this transition period, but only in the late 1990s a coherent and a large scale program was launched.

Since there are important financial resources allotted to this type of spending, it is necessary to evaluate the social benefit they bring. Despite the great interest of this topic, both for scientist and for politicians, there are quite a few studies on Romanian labour market policies. One of the reasons is the unavailability of data and the lack of surveys on labour market policies.

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1. Recent Trends on Romanian labour market

The past 17 years have been a time of dramatic transformation in Romania. The transition from command to market economy produced remarkable changes in the social,
political and economic infrastructure. From an economic point of view, these changes were most important in real output and factor markets, particularly in labor allocations.

As the old socialist economic model was breaking apart, real output collapsed in every formerly communist country, albeit with different intensities. While in the Central European countries, the output has recovered after the initial decline and by 1996 has reached and exceeded the 1990 level, the transition process in the Romania has been associated with a longer-lasting recession.

After 2000 the GDP (gross domestic product) stopped decreasing and thus 2005 was the sixth year of uninterrupted economic growth (figure1), though accompanied by a widening current account deficit and a slowdown of disinflation. Although the overall evolution of the economy was positive, a slowdown in growth was forecasted for 2006, following a tightening of the country’s fiscal and monetary policies after the relaxation in 2005.

In addition to changes in the level of GDP, the restructuring process involved a significant shift in economic activity across sectors. Services continue to have the greatest contribution to GDP, but their weight reaches to approximately 45.3% in 2005, as compared to levels in the region, of 60% in Hungary or the Czech Republic, or even 73% in France or the United Kingdom. Industry ranks second with 28% in 2005. Due to seasonal influences agriculture shrinks in to 8.3% of the GDP in 2005 as against 11.6% in previous year.

During the past 15 years significant changes have taken place in relation to the size and composition of the Romanian labour market. The number of employees has gradually decreased, and from 1990 to 2000, more than 2.3 million jobs have been lost mostly in large enterprises through early retirement, unemployment and migration of workforce abroad. After 2000, the declining trend levelled out and the average number of employees kept almost constant around 4.6 mln with minor fluctuations.

Figure 1
After 1990, Romania experienced two peaks of unemployment, the first occurring in 1994 (10.9%) associated with the early adjustment measures of the Government aimed at achieving macroeconomic stabilization, and the second in 1999 (11.8%), related to restructuring and liquidation of some major loss making sectors (mainly the mining sector). Romania is a country with the lowest unemployment ratio after the Czech Republic where the performance is exceptionally good. Especially in 1996 the speed of decrease of unemployment ratio is more rapid than any other Central and Eastern European countries. This good result at least in figures is crossly connected with social security system, labor market policy (especially skill retraining of persons unemployed), wage policy and so on. (Yoshii, 2006)

The official unemployment rate levels in Romania were moderate if compared with those of peer countries in Central Europe. For instance, according to the EU Statistics Office (Eurostat), in 2004 the Czech Republic had 8.3% unemployment, Bulgaria 12%, Slovakia 10% and Poland 18.9%. Still Romania with 6.2% was behind Slovenia (6%) and Hungary (5.9%).

While the social and economic context considered above has certainly contributed to the rise of the unemployment rates, there are certain characteristics of the composition of unemployment in the transition countries which indicate that labor market rigidities
might have played an important role. First, the youth unemployment rates are particularly high in Romania. Past research does suggest that youths tend to be the most adversely affected group by labor market rigidities, especially in a context of wage compression. Second, the long-term unemployment rates have been steadily increasing. The share of long-term unemployed (unemployed more than one year) has soared to alarming levels in Bosnia and Herzegovina (76 percent), Serbia and Montenegro (82 percent), and Macedonia (83 percent).

Another important factor that explains the low unemployment is the large external migration.

The migration phenomenon has had a series of positive effects, such as reduction of poverty and social problems, especially in the rural environment and at the level of the domains which were strongly affected by the economic restructuring in the last years of transition. Estimates suggest that more than 2 million Romanians currently work abroad. They send around Euro 7 bn. in 2007 back to their country, which represent around 5% of GDP.

The fact that in the last period of time the migration phenomenon has increased, has led to a labor deficit in certain domains such as constructions, agriculture, tourism, construction materials, mechanical processing, clothing and leather goods industry (Cindrea, 2007)

II. A Brief Overview of Labour Market Policies In Romania

The labour market is a complex environment were services are carried out, measures undertaken and financial benefits granted to those in need in order for this mechanism to function as smoothly as possible. These three elements: LMP services, LMP measures and financial supports for LMP are briefly presented within this section.

LMP services refer to labour market interventions where participants are engaged in job-searching. In this context participation is usually related to finding a job, so to employment, and does not result in an alteration of the participants’ status in the labour market. Labour market services (category 1) are all services and activities “which
facilitate the integration of unemployed persons and jobseekers in the labour market or that assist employers in recruiting and selecting staff” (European Commission and EUROSTAT, 2006, pg. 12).

Providers of these services or activities are the public service of employment and other agencies or public institutions. In Romania these are represented by: the National Agency for Employment (NAE) with its territorial units and other public agencies contracted under public finance on the basis of individual contracts closed with NAE.

The next element, LMP measures (active measures) refers to interventions in the labour market where the main activity of participants is the active job-search and which results in the change of their status in the labour market.

Active job-search implies undertaking precise activities, such as: participation in professional development measures that aim at initiation, training, re-qualification, improvement and specialization and start-up measures, etc., while gaining the status of employed person.

LMP measures refer to governmental interventions that provide temporary financial support for disadvantaged groups in the labour market. Most of the measures aim at activating the unemployed persons, assisting people while shifting from (involuntary) inactivity to employment or at “maintaining the jobs of persons threatened by unemployment”.

Last, but not least, financial supports for LMP (passive measures) refer to interventions that provide financial assistance for disadvantaged persons in the labour market directly or indirectly. Participants in this type of interventions are usually unemployed persons and jobseekers, as well as early retired persons; participants in active measures related to job-search can also benefit from this type of interventions.

Moreover, apart from the public interventions presented above statistics regarding labour market policies (LMP) collect qualitative information about:

- three reference dates on:
  - the persons registered, seeking a job (I32);
  - registered unemployed persons (I33);
- other jobseekers (I34).
- **two auxiliary measures** to adjust double-counting within LMP categories:
  - adjustment (I35) to eliminate double-counting within category 4 – *employment incentives* – used to determine the number of persons participating at the same time in one or more interventions within this category;
  - adjustment (I36) to eliminate double-counting within category 8 - *unemployment financial assistance* – which focuses on determining the number of persons participating at the same time in one or more interventions within this category.

During 2004-2005, the time period under analysis, following public interventions corresponding to the following LMP categories did not take place: Category 3: Job rotation and job sharing; Category 5: Supported employment and rehabilitation; Category 9: Early retirement.

The European Employment Strategy has recommended the following actions: firstly, to shift resources from passive LMPs (i.e. those concentrating on providing income support) to active LMPs (i.e. those attempting to improve the labor market prospects of participants); and secondly, to take better account of the interactions between ALMPs and tax and benefit systems, preferably in the framework of activation strategies, in order to increase the effectiveness of ALMPs.

Under these circumstances, in Romania, passive measures continue to be in the top, regarded from the expenditure allocation point of view, although their quantity has been reduced lately because of the fall in the number of eligible unemployed and the reduction of the period for which unemployed receive unemployment benefits. It is obvious that since the introduction of a new legal framework, Law no. 76/2002, the philosophy of employment policies has changed radically, going in the direction of better balances between active and passive policies. The reduction in the period of allotting unemployment benefits together with narrower eligibility criteria and adequate stimulus for re-employment before the legal period of unemployment benefit has expired, are real steps towards reforming and drawing near a more dynamic and inclusive labour market.

**Figure 2**
During 2004-2005 Romania spent 0.63% of the GDP to support the integration of unemployed and other disadvantaged groups in the labour market. The expenditures regarding public interventions in the labour market in Romania did not register significant variations during the two reference years. In order to implement labour market policies, 1553.4 million RON were spent during 2004 and 1550.6 million RON during the next year.

During 2005, the decrease by 0.2%, in the total of expenditures was caused by the decrease in expenditures with financial benefits from category 8 – Unemployment financial assistance. For each of the two years, 2004 and 2005, 77.4% and 73.3% in the total expenditures produced by public interventions were expenditures directed towards financial supports (passive measures).

In turn, the active measures represented 16.3%, respectively 20.0% in the total expenditures with the LMP interventions in 2004, and respectively in 2005.

**LMP services**

In 2005 the expenditures with the LMP services raised at 103.5 million RON, a slight increase (+6.1%) compared to the previous year (97.6 million RON). 0.04% was the share in GDP of those expenditures in 2004, as well as in 2005. During those years,
the expenditures related to interventions on managing services, measures and financial benefits were predominant within that category (99.1% in 2004 and respectively 99.4% in 2005).

In 2005, within “Work mediation” intervention the monthly average number of participants was of 534 thousand persons, decreasing by 14.5% as compared to the previous year. During the same time period, the number of entrants registered a decrease by 13.9% (from 1215 thousand persons in 2004 to 1047 thousand persons in 2005).

The number of exits related to those interventions (by finalization or abandon) was lower in 2005 as compared to 2004 (1101 thousand persons versus 1303 thousand persons).

**LMP measures (active measures)**

309.8 million RON were spent in 2005 with the LMP measures, 22.5% more than in the previous year (252.9 million RON in 2004).

The highest share in the total expenditures with the LMP measures was held by the employment incentives (category 4) with 58.2% in 2004, in a slight share decrease of 51.5% during the next year. Approximately one third of the total expenditures with the LMP measures was made with the measures in category 6 – *Direct job creation* (32.7% in 2004 and respectively 36.2% in 2005). The sums spent with the vocational training (category 2) of the persons belonging to the LMP measures target groups exceeded 21 million RON in 2004, and were 15 million higher during the next year.

Within category 2 – *Vocational training*, the highest participation rate was registered both by the monthly average set, as well as by the number of incomers and exits.

In 2005, the set of participants in intervention I7 represented 98.3% of the monthly average set of category 2 – Vocational training, while in 2004 that raised at 99.1%.

A similar situation was noticed in the case of incomers, as well: 98.8% in 2004 compared to 97.9% in 2005. Still, the monthly average set in 2005 was 76.1% higher than in the previous year, while the number of incomers raised at 53.2%. The number of outcomers of that intervention was approximately 2.2 higher in 2005 than in 2004. Though an increase in both the set of incomers, as well as the set of outcomers was
noticed within intervention I7 – *Vocational training*, the employment rate registered a decrease in 2005 as compared to 2004; thus, as a consequence of participating in that intervention the share of employed persons raised at 44,1% in 2005 as compared to 65,0% in 2004.

**Financial supports for LMP (passive measures)**

The integration of unemployed and persons belonging to disadvantaged groups in the labour market was achieved especially by means of passive public interventions, respectively financial supports for LMP during the period under analysis.

Thus, the expenditure of 1137,3 million RON with the financial support slightly decreased (by -5,5%) in 2005 as compared to the previous year (1202,9 million RON). The share in GDP raised at 0,49% in 2004 and 0,46% in 2005.

Except for intervention I21 which registered a 13,4% expenditure increase in 2005 versus 2004, all other financial supports for LMP related interventions registered decreases during the two years.

Intervention I1 registered the highest decrease (-86,3%) due to abrogating Law nr. 1/ 1991 regarding the social protection of unemployed and their vocational integration that served as legal fundament of the respective intervention. The cause related to the new unemployment law, respectively Law nr. 76/ 2002 regarding the unemployment insurance system and employment incentives (I2) coming into force. The unemployment indemnity related expenditures (over 60,0%), granted according to Law nr. 76/ 2002 had the highest share in the passive LMP measures related expenditures, decreasing by 80 million RON in 2005 as compared to 2004.

The amount spent as completion of incomes with the restructuring processes within the defense industry and state sector (I21) was higher by 40 million RON in 2005 as compared to 2004, its share in the total expenditures with passive LMP measures increasing from 24,0% (in 2004) to 28,8% (in 2005).

The financial support for LMP related category registered a decrease in the monthly average set of participants (- 15,2%) in 2005 compared to 2004 by means of category 8 - *Unemployment financial assistance*. 
The only increase in the monthly average set registered for intervention I21 – *Completion of incomes during restructuring processes within defense industry and state sector* (from 59,4 thousand persons in 2004 to 65,8 thousand persons in 2005). The most significant reduction of incomings by 73,4% in 2005 as compared to 2004 was noticed for intervention I22 – *Unique payments for reorganization and privatization processes within societies with state majority capital and compensatory payments*.

**III. The Method: Data Envelopment Analysis and Malmquist index**

We use for our purpose Data Envelopment Analysis (DEA), which is a new method proven to be useful in a diverse variety of applications in managing, examining and improving efficiency. It was originally developed to measure the performance of various non-profit organizations, such as educational and medical institutions, which were highly resistant to traditional performance measurement techniques due to the complex and often unknown relations of multiple inputs and outputs and non-comparable factors that had to be taken into account. In recent years it has been successfully applied in measuring both for-profit and non-profit organizations, such as the effectiveness of regional development policies in northern Greece by Karkazis and Thanassoulis (1998).

Coelli, Rao and Battese (1998) introduce the reader to this literature and describe several applications. The term “firm”, sometimes replaced by the more encompassing Decision Making Unit (henceforth DMUs), the term coined by Charnes et al. (1978), may include non-profit or public organisations, such as hospitals, universities or local authorities.

Efficiency is determined as the ratio of outputs in relation to inputs of a given entity that is examined, which is referred to as DMU. DEA measures the relative efficiency by the observable inputs and outputs of several, different DMUs, assigning them efficiency scores ranging from 0 to 1, the score of 1 given to the most efficient in the group measured. The fundamental difference between traditional statistical approaches and DEA is that while the former reflects the average behavior of the
observations, DEA deals with best performance, evaluating all performances from the efficiency frontier formed by the most efficient DMUs (Cooper et al. 2007).

This quality points out the usefulness of DEA in benchmarking applications as the notion of best performance is built in to the method itself. More than that, there are identified the inefficient - less productive DMUs compared to the best practice DMUs.

The method also has other advantages, such are the possibility to estimate efficiency of DMUs with multiple input and output production technology that allows to avoid calculating a single measure of input or output; a possibility to determine the amount of input to be used or the size of output to be achieved for each organization to become fully efficient.

The purpose of an input-oriented approach is to study by how much input quantities can be proportionally reduced without changing the output quantities produced. Alternatively, and by computing output-oriented measures, one could also try to assess how much output quantities can be proportionally increased without changing the input quantities used. The two measures provide the same results under constant returns to scale but give different values under variable returns to scale.

The analytical description of the linear programming problem to be solved, in the variable-returns to scale hypothesis, is sketched below for an output-oriented specification. Suppose there are k inputs and m outputs for n DMUs. For the i-th DMU, yi is the column vector of the inputs and xi is the column vector of the outputs. We can also define X as the (k×n) input matrix and Y as the (m×n) output matrix. The DEA model is then specified with the following mathematical programming problem, for a given i-th DMU:

\[
\begin{align*}
\text{max} & \quad \Phi \\
\text{s.t.} & \quad \phi y_i + Y\lambda \geq 0 \\
& \quad x_i - X\lambda \geq 0 \\
& \quad N_{i}\lambda = 1 \\
& \quad \lambda \geq 0
\end{align*}
\]

(1)

In problem (1), θ is a scalar and \(1 \leq \phi \leq \infty\).
$\phi - 1$ is the proportional increase in outputs that could be achieved by the $i$th DMU with the input quantities held constant.

The measure $1/\phi$ is the technical efficiency score and varies between 0 and 1. If it is less than 1, the public intervention is inside the frontier (i.e. it is inefficient), while if it is equal to 1, it implies that the intervention is on the frontier (i.e. it is efficient).

Vector $\lambda$ is a $(n \times 1)$ vector of constants that measures the weights used to compute the location of an inefficient DMU if it were to become efficient. The inefficient DMU would be projected on the production frontier as a linear combination of those weights, related to the peers of the inefficient DMU. The peers are other DMUs that are more efficient and therefore are used as references for the inefficient DMU. $n1$ is a $n$-dimensional vector of ones. The restriction $n1'\lambda = 1$ imposes convexity of the frontier, accounting for variable returns to scale. Dropping this restriction would amount to admit that returns to scale were constant. Notice that problem (1) has to be solved for each of the $n$ DMUs in order to obtain the $n$ efficiency scores.

The analysis of efficiency change using considered methods obviously requires more complicated operations and calculations. One of the possibilities is based on the work of Malmquist (1953). It measures the efficiency change between two data points (corresponding to two different time periods) by calculating the ratio of the distances of each data point relative to some frontier (based either on the first or on the second period). Thus, calculation of Malmquist efficiency index requires additional operations which are distinct from traditional DEA (for example, calculation of a distance between the point characterizing the production of some firm in the first period and the frontier based on the second period data).

**IV. Efficiency analysis of LMP in Romania**

As shown in Section II of the paper, in Romania there are 9 categories of interventions on the labour market and in Romania there are by law 31 such interventions. Not all were applied during 2004-2005 and from those applied not all were available in terms of data.
I use data provided by National Agency for Employment (NAE) statistics and also from the National Institute for Statistics (NIS).

One of the problems I confronted with was the lack of data for some of the interventions. In order to have comparability between the two years, I selected the interventions that took place in every year and could be characterized by the necessary data. Therefore, I obtained a set of 10 interventions which represent the three types of measures: LMP Services, LMP measures, LMP financial supports.

The interventions are the DMU for the efficiency analysis and are presented in the table below:

Table 1. The set of DMUs

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Information and professional counseling for registered jobseekers</td>
<td>I5</td>
</tr>
<tr>
<td>2. Labour mediation</td>
<td>I6</td>
</tr>
<tr>
<td>3. Vocational training</td>
<td>I7</td>
</tr>
<tr>
<td>4. Training for other disadvantaged persons in the labour market</td>
<td>I29</td>
</tr>
<tr>
<td>5. Training for detainees</td>
<td>I30</td>
</tr>
<tr>
<td>6. Income top-up for unemployed persons finding work before the expiry of the unemployment benefit period Completion of employees’ incomes</td>
<td>I11</td>
</tr>
<tr>
<td>7. Temporary employment</td>
<td>I19</td>
</tr>
<tr>
<td>8. Unemployment benefit</td>
<td>I1</td>
</tr>
<tr>
<td>9. Unemployment indemnity</td>
<td>I2</td>
</tr>
<tr>
<td>10. Support in case of restructuring in the defense sector or State owned companies</td>
<td>I21</td>
</tr>
</tbody>
</table>

Because of a very small number of participants in 2004, Training for other disadvantaged persons in the labour market was eliminated from the set of analyzed interventions. The analysis was therefore conducted for 9 public interventions on the labour market.

One of the advantages of the DEA method is that there are no restrictions in respect with the number of inputs and outputs used in analysis of efficiency. I am using two inputs for analyzing the efficiency of the labour market interventions: the total amount of expenditures on each intervention and the number of participants. The expenditure to be reported is defined as being "...the value of all benefits provided to
individuals or organizations in the form of cash, reimbursements, directly provided goods and services, and revenue foregone through reductions in obligatory levies. The administrative costs associated with the measure should not be included." (EUROSTAT, NIS). The expenditures were expressed in RON, the national currency.

The second input was the number of participants on each public intervention. The LMP collects information on public interventions (measures) in favour of persons disadvantaged in the labour market. Three variables are requested in order to evaluate the numbers of participants in these measures: stock, entrants and exits. Stock refers to the number of participants in a measure at a given moment. Entrants refer to the number of participants joining the measure during the year (inflow). Persons already in the measure from the previous year are not included. Exits refer to the number of participants leaving the measure during the year (outflow). I measured the number of participants using the average monthly stock, calculated as an average of the existing number of participants at the end of each month.

The output was the percentage of exits with destination employment in the total number of exits.

The number of inputs and outputs depend on the number of DMUs, but there are also restrictions in terms of available data.

Charnes and Cooper (1991) have suggested, as a rule of thumb, that there should be three times as many DMUs as the number of inputs plus outputs. Therefore, I estimate that the minimum number of DMUs required is achieved by applying the rule of thumb:

\[ n \geq \max\{m \times s, 3(m + s)\} \]

Where
- \( n \) = number of DMUs,
- \( m \) = number of inputs and
- \( s \) = number of outputs, resulting in the following:

\[ n \geq \max\{1 \times 2, 3(2 + 1)\} \]
\[ . n \geq 9 \]

Hence, we limit the use of the model to situations where the minimum number of estimable DMUs is 9.
DEA scores were estimated using the DEAP software version 2.1, developed by Coelli (1996). The efficiency scores of the policy measures were calculated under variable returns to scale (VRS) assumptions, fact that seems more appropriate to the purpose of the research. Under variable returns to scale an increase in inputs is expected to result in a disproportionate increase in the outputs delivered by the DMUs.

I use an output oriented approach, being interested in the extra output that can be obtained, using the same amount of inputs. The method was applied for each of the years 2004 and 2005 and the changes in efficiency were analyzed using the Malmquist index.

Figure 3

In 2004 there were five policy public interventions on the technical efficiency frontier. Labour mediation is a service provided by the National Agency for Employment, while vocational training, training for detainees and income top-up for unemployed persons finding work before the expiry of the unemployment benefit period are active labour market policy measures which have proved to be efficient.

In Romania, passive measures continue to be in the top, regarded from the expenditure allocation point of view, although their quantity has been reduced lately because of the fall in the number of eligible unemployed and the reduction of the period for which unemployed receive unemployment benefits. Among the passive measures
analyzed, unemployment benefit proved to be efficient, while unemployment indemnity was one of the most inefficient measures. This reflects a waste of financial resources, since the measure is one with the highest expenditures.

The intervention with the lowest technical efficiency score was *Support in case of restructuring in the defense sector or state owned companies* that should be reconsidered. During 2005 the number of measures situated on the efficiency frontier decreased and two measures were no longer efficient.

Although there has been an increase in the public expenditure for training courses in the last three years, this rate is not sufficient, but it is going to be accelerated by accessing the European Social Fund. Vocational training, the active measure which is considered to play the most important part in the sustainable development of human resources and in increasing labor market inclusiveness, remains close to the frontier, with a score of 0.867; while the training for detainees loses its position on the frontier. Labour mediation situated in both years close to the frontier remains one of the services with the highest number of participants.

Among the nine measures, *Support in case of restructuring in the defense sector or state owned companies* increased more than four times its efficiency. Unemployment indemnity also improved efficiency in 2005, increasing more than 1.7 times. Temporary employment was less efficient in 2005 and participants in that program were more likely to become long term unemployed.

### Table 2

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Malmquist index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information and professional counseling for registered jobseekers</td>
<td>1.015</td>
</tr>
<tr>
<td>Labour mediation</td>
<td>1</td>
</tr>
<tr>
<td>Vocational training</td>
<td>0.865</td>
</tr>
<tr>
<td>Training for detainees</td>
<td>0.4</td>
</tr>
<tr>
<td>Completion of employees’ incomes</td>
<td>1</td>
</tr>
<tr>
<td>Temporary employment</td>
<td>0.468</td>
</tr>
<tr>
<td>Unemployment benefit</td>
<td>1</td>
</tr>
<tr>
<td>Unemployment indemnity</td>
<td>1.756</td>
</tr>
<tr>
<td>Support in case of restructuring in the defense sector or state owned companies</td>
<td>4.044</td>
</tr>
</tbody>
</table>
Although in Romania the practice of continuous evaluation and monitoring is far from becoming a true culture, in the last few years, this has been an attempt to evaluate the efficiency of the nine interventions on the labour market policy.

The results are encouraging, showing that five measures were efficient in 2004, and three measures were on the efficient frontier on 2005. Out of the nine measures, three improved the efficiency scores in 2005 and three were more inefficient compared to 2004. All the above findings imply that the Romanian policy makers must find those policy measures that stimulate better and more efficient the resource allocation for more effective public provision services.

The research is in progress and the results would thus be strengthened by a more thorough investigation by taking into account more factors affecting the efficiency of the labor market policies.
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