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Swiss Unemployment Policy: An Evaluation of the Public Employment Service

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1 Introduction

Swiss unemployment has considerably changed during the last fifteen years. In the 1990s, the unemployment rate attained levels that exceeded those observed during the recession provoked by the oil shocks of the 1970s. In addition, the share of long-term unemployed[1] in the pool of unemployment, which amounted to nearly 10% at the beginning of the 1990s (8.7% in 1992), then dramatically increased to reach 34.1% in 1997. In order to face this new social and economic problem, the Swiss federal authorities adjusted their labour market policy. Before 1996, the Swiss unemployment policy was mainly based on "passive" measures guaranteeing the unemployed an acceptable income level. This included the federal unemployment insurance scheme, which underwent several modifications in the 1990s, e. g. regarding the duration of unemployment insurance benefit (UIB) entitlement. Since 1996, the labour market policy has been complemented by the so-called "active" labour market measures aiming at a rapid re-integration of unemployed people into the labour market. To achieve this re-integration, active labour market programmes (ALMPs) were created, including vocational training courses and occupational programmes. These programmes are aimed at improving the employability of job-seekers by providing them with the missing skills and work experience. The percentage of unemployed people participating in such programmes is very high in Switzerland in comparison to other European countries (Martin and Grubb, 2001). At the same time, important efforts were made to improve matching between the unemployed job-seekers and vacancies. Better matching means shorter duration of the job-search. To improve this matching and to manage the active labour market programmes, about 180 regional

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1 People searching for a job for more than one year.

employment offices (REOs) were created. These offices replaced more than 3000 local placement offices that existed in Switzerland before 1996, and constituted a more professional public employment system. The reform of the Swiss placement system was achieved in a short time limit – between 1996 and 1997 – and was conducted during a period of high unemployment.

The introduction of ALMPs and the reform of the national employment system represented important efforts in fighting unemployment. These efforts necessitated both involvement of significant human resources and substantial financial spending. Therefore, the questions of how effective these measures are in fighting unemployment and how their efficiency may be improved are important for both policy-makers and practitioners in charge of implementing the labour market policy. This paper addresses the issue of evaluating the economic efficiency of regional employment offices and suggests different ways of improving the performance of those offices found to be inefficient.

The effects of new labour market policy have been addressed by several authors from both an economic and a sociological point of view. On the economic side of the analysis, Lalive et al. (2000), Gerfin and Lechner (2000), and Lechner (2002a, 2002b) analysed the impact of participation in active labour market programmes on the duration of individual unemployment spells in Switzerland. The question of which socio-economic group of unemployed job-seekers benefits most from participation in different types of labour market programmes was also examined. However, Martin and Grubb (2001) emphasise that while the studies of the impact of ALMPs on different outcomes such as duration of unemployment, post-unemployment wages, and personal trajectories on the labour market (including the choice between activity and inactivity) are important, they need to be complemented by analysis of the impact of the public employment system. Indeed, there is some evidence that this system represents an effective and not so costly tool with which to tackle the unemployment problem (see the review of international evidence in Martin and Grubb, 2001).

The existing literature on the economics of public employment services is scarce.[2] In Switzerland, ATAG Ernst and Young (e.g. see ATAG Ernst and Young, 1999) perform a yearly efficiency evaluation of regional employment offices using a variation of the parametric non-stochastic Corrected Ordinary Least Squares (COLS) technique (Greene, 1993) applied to cross-section data. Sheldon (2003) uses the non-parametric non-stochastic Data Envelopment Analysis (DEA) technique in his cross-section study. This study completes the existing literature by providing an analysis of the efficiency of REOs undertaken by means of various econometric and statistical tools using both cross-section and panel data. This

2 The international literature comprises the studies of Cavin and Stafford (1985) on cost efficiency of U.S. employment offices, and Althi and Behrenz (1998) and Torgersen et al. (1986) on technical efficiency of Swedish and Norwegian employment offices, respectively.

allows some conclusions to be drawn regarding both the means to improving efficiency in each employment office, and the nation-wide organisation of the public employment system as a whole.

In the next section, we introduce the objectives of the efficiency evaluation and explain why evaluating the public employment system is useful in the Swiss setting. This leads on to the presentation of the methods used to evaluate the economic efficiency of regional employment offices. In particular, the view of an REO as a production unit is introduced and justified. Section 4 briefly describes the data. Section 5 presents and discusses the evaluation results and provides an example of how the findings might be used by practitioners, e.g. by the REO's managers. The last section presents the main conclusions derived from this analysis.

2 Evaluating the efficiency of employment offices

2.1 The need for efficiency evaluation

In 2000, an agreement was concluded between the Swiss federal authorities and cantons regarding the performance evaluation of regional employment offices (*Accord ORP/LMMT/Autorité cantonale* 2000, 2003).[3] According to this agreement, the performance of regional employment offices was to be evaluated with respect to four criteria. These include the degree of success in lowering the mean duration of unemployment spells of job-seekers registered with the REO, as well as how successful the REO is in reducing the number of people entering the long-term unemployment, the number of unemployed loosing their entitlement to the federal unemployment insurance benefit (which occurs after two years of unemployment),[4] and finally, the number of people re-entering unemployment less than four months after having found a job. Initially, introduction of a performance-based budgeting scheme for REOs was planned. This premium/penalty scheme would financially reward those cantons whose REOs were the most effective and penalize the least effective ones. However, the performance-based budgeting was never fully applied, at least with respect to this penalty.

The public employment system is a part, or a tool, of Swiss labour market policy, which is subject to regular evaluation according to above-mentioned agreement. Evaluation of public policy is obviously a complex task and may be conducted in different ways depending on the objective of evaluation. Commonly, evaluation of public policy has the following objectives (Monnier, 1992):

- Allow the public institution to modify its actions regularly in order for them to meet the current needs of society most adequately;

3 This agreement was renewed in 2003.

4 Nowadays, this duration has been reduced to 18 months.

- initiate the learning process and generate transmission of best management practices between public institutions, especially in decentralised cases;
- render the public policy credible in the eyes of public opinion.

Therefore, evaluation is not intended to be a sanction, neither should it be confused with the pursuit of short-term resulting returns, e. g. from cost reductions or decreasing public spending.

Evaluation of public policy may be conducted from different points of view; in the rest of the paper, economic *technical* efficiency is considered, which is one of many possible approaches. The objective of efficiency evaluation is to determine whether or not the resources and efforts engaged in the public policy were deployed in the optimal way. What is considered as "optimal" obviously depends on the choice of performance criteria. In the case of regional employment offices, these criteria were chosen by the federal authorities and cantons, so this study conforms to this choice and selects performance indicators as close as possible to those appearing in *Accord ORP/LMMT/Autorité cantonale* (2000; 2003).

In the case of the Swiss public employment system, evaluation was initially designed to provide the REOs with incentives to improve their performance. The performance criteria were fixed in such a way that better performance would mean a lower unemployment rate in the local labour market.[5] The yearly evaluation was performed by means of ATAG Ernst and Young's (ATAG hereafter) model and ranks REOs according to their performance. The existence of such a ranking is expected to push the offices towards better performance by generating competition among them. Very importantly, the ranking obtained using the ATAG model takes the exogenous environment into account – including local labour market conditions, individual characteristics of the unemployed workers registered at REO, etc. These exogenous conditions are beyond the control of employment offices and may influence their performance. However, the ATAG model leaves aside several important objectives that evaluation of public policy might have. Namely, how may the performance of a given office be improved? Would a centralisation or decentralisation of nation-wide employment service lead to better performance? Our evaluation complements the yearly performance assessment of ATAG by bringing a decision-making tool to the attention of policy-makers and practitioners that may help the least efficient REOs to discover what the more efficient REOs are doing differently, and so to apply the most effective management practices.

2.2 Schematic representation of the activities of an employment office

The ultimate goal of regional employment offices is to match unemployed jobseekers with potential employers. To achieve this matching, REOs execute different

5 For example, shorter mean unemployment duration would imply lower unemployment rate.

tasks such as regularly performing job counselling sessions with unemployed persons to discuss individual job-search strategies and support their motivation; identifying the job vacancies existing at the local labour market; organising active labour market programmes and assigning job-seekers to different ALMPs in the most effective way; and finally, applying financial sanctions to the job-seekers who do not comply with the REO's job-search requirements (e. g., cuts in unemployment insurance benefit).

Currently, Swiss public employment services are produced by joint efforts in which federal authorities supply operating funds and the cantons retain administrative control of local operations. It is up to the cantons to decide whether the activities of their employment offices are responsive to the needs of the given locality and are appropriate to lowering the unemployment rate in the cantons. Accordingly, substantial differences between cantons were indeed reported in the use of various labour market programmes and in the administrative organisation of employment offices. For example, the number of job counselling sessions per unemployed per month varies greatly between REOs, as well as the number of job-seekers per REO job counsellor (Curti and Meins, 1999; see also Table 1).

The Swiss placement system being decentralised, activities and organisation of employment offices are different from one canton, and even REO, to the other. The common feature of all REOs is that they use some resources – both human and financial – to influence the size and composition of the pool of unemployment on the local labour market. To evaluate the efficiency of employment offices in their fight against unemployment, we consider REOs as public enterprises providing services to the society, including unemployed job-seekers and potential employers. These enterprises – or Decision Making Units (DMUs), which is the term used in efficiency measurement literature – employ resources, or inputs, to transform these inputs into outputs, or goals. The placement process is therefore seen as a transformation process in production economics. In the case of employment offices, resources are mainly composed of labour input. The number of job counsellors working at REO will be used throughout this paper as a proxy for this input.[6]

Regarding the goals of employment offices, the objective of REOs is to influence four transition flows on the labour market. These flows are:

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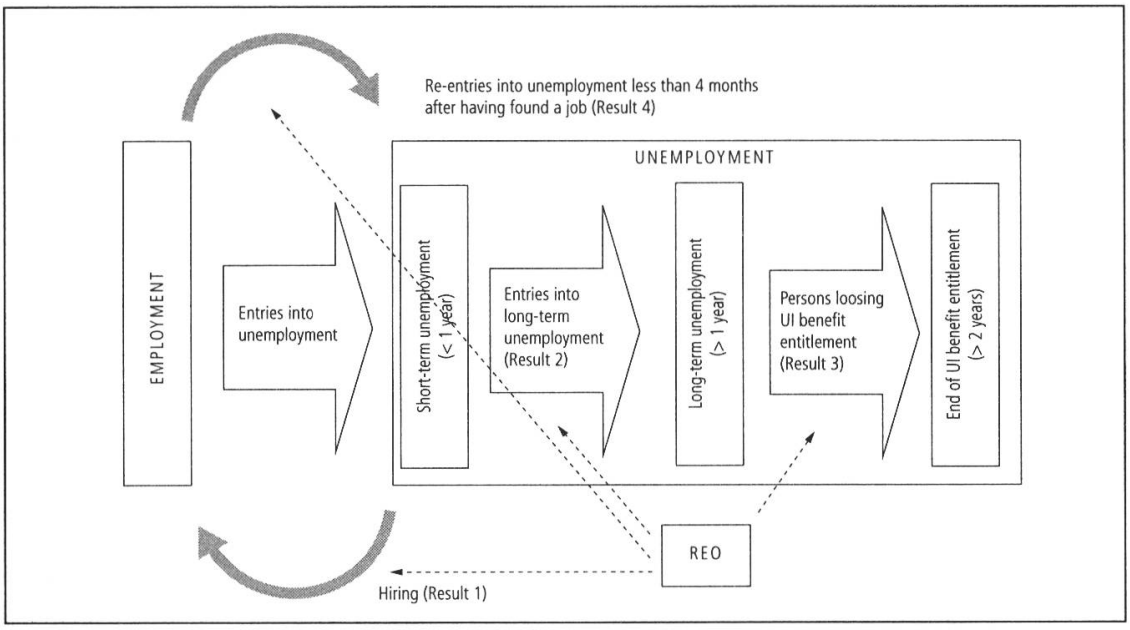
6 The number of job counsellors is only a proxy of labour input because REOs employ, in addition to job counsellors, some administrative staff. Moreover, qualification and experience of persons employed at REOs varies from one person to another. It could be argued that REO workers having different qualifications should be considered as different types of labour input. However, no information regarding the qualification of REOs' staff could be obtained, nor regarding the total number of workers employed at each office. Therefore, the number of job counsellors was used as a proxy. The data on capital (e. g., the office space and computer terminals) are also missing, so that the authors are forced to adopt the hypothesis that the capital input is strictly proportional to the labour input.

- *Hiring flow* (i. e., transitions from unemployment to employment), which should be increased as much as possible in order to shorten the duration of unemployment spells.
- *Entries into long-term unemployment* (unemployment longer than one year): it is well known that long-term unemployment is very painful to workers and costly to the society. Indeed, lasting unemployment deteriorates the skills of unemployed worker and affects his or her search motivation, thus negatively influencing both the economic and social capacities and networks of the job-seeker. Unemployment offices should reduce as much as possible the number of entries into long-term unemployment in order to avoid its ominous consequences. Note that increasing the hiring flow does not automatically decrease the number of entries into long-term unemployment, because employment offices may concentrate their placement efforts on the job-seekers who have the best profiles, so that the number of entries into long-term unemployment remains unaffected.
- *Exits from unemployment* without finding a job and after losing entitlement to the federal unemployment insurance: this transition flow should be decreased for the same reasons as those concerning the number of entries into long-term unemployment. And finally,
- The number of *re-entries into unemployment less than four months* after having found a job should be decreased as much as possible in order to improve the quality of matches between job-seekers and vacancies.

Figure 1: Schematic repreemployment officesentation of economic activity of a regional employment office



Economic activity of REOs is summarised in Figure 1, where the transition flows that might be influenced by the activities of employment offices are indicated by the dashed arrows.

Note that the activities of employment offices – be it counselling sessions, ALMPs, or sanctions – are considered to be the means to achieve the goals of influencing the transition flows on the labour market. Therefore, they have not been included in the main core of analysis in this study.

Obviously, the process of matching unemployed workers to job vacancies is influenced by the exogenous conditions prevailing in the local labour market. These include both the factors affecting the labour supply – e. g., the structure of skills of job-seekers, their age, the type of working time arrangement they are looking for (full-time or part-time), etc. –, and the factors related to the labour demand – e. g., the availability of job vacancies. These exogenous factors are outside the managerial control of regional employment offices and affect all four transition flows which can be influenced by the REOs.[7] *Accord ORP/LMMT/ Autorité cantonale* (2000; 2003) emphasises that the measurement of efficiency of employment offices should be *net* of the influence of exogenous factors, so that the "pure" managerial efficiency is compared across REOs. Therefore, the efficiency measurement techniques used in our study control for the environment in which each REO operates. The latter is captured by the age, gender, nationality, and other individual characteristics of the unemployed workers registered at each REO, as well as some variables relative to the canton where the employment offices operate.

3 Efficiency measurement techniques

This section introduces econometric and statistical methods used in implementing the efficiency measurement model. Priority is given to intuitive presentation of the ideas underlying the efficiency measurement techniques. For further details the interested reader may refer to specialised textbooks (Färe et al., 1994; Färe and Primont, 1995; Coelli et al., 1998).

Currently, the measurement of productive efficiency is a well established field in economics so that many methods are available. All these methods rely on the same idea: performance of an institution is evaluated either on the basis of its ability to provide as many outputs as possible with the resources at its disposal, or alternatively, on the basis of its ability to use the smallest possible amount of

7 An important empirical literature relates the duration of job-search to the individual characteristics of job-seekers. The interested reader may refer to e. g. Lalive et al. (2000) and Gerfin and Lechner (2000). This literature gives insights into the way in which individual characteristics – qualification, age, etc. – influence the chances of success of the placement process undertaken by REOs.

resources to produce a given amount of outputs. In what follows, the first approach is adopted, because the objective of employment offices is obviously to reduce unemployment rather than reduce the cost of operating the REOs themselves.

Once the resources at the disposal of Decision Making Units (be it REO or other institutions) and their goals are classified either as inputs or outputs,[8] the relation between inputs and outputs may be represented by means of a production frontier. This production frontier may be estimated empirically if data are available. Such an estimation is illustrated in Figure 2 in a simple one-input, one-output case.

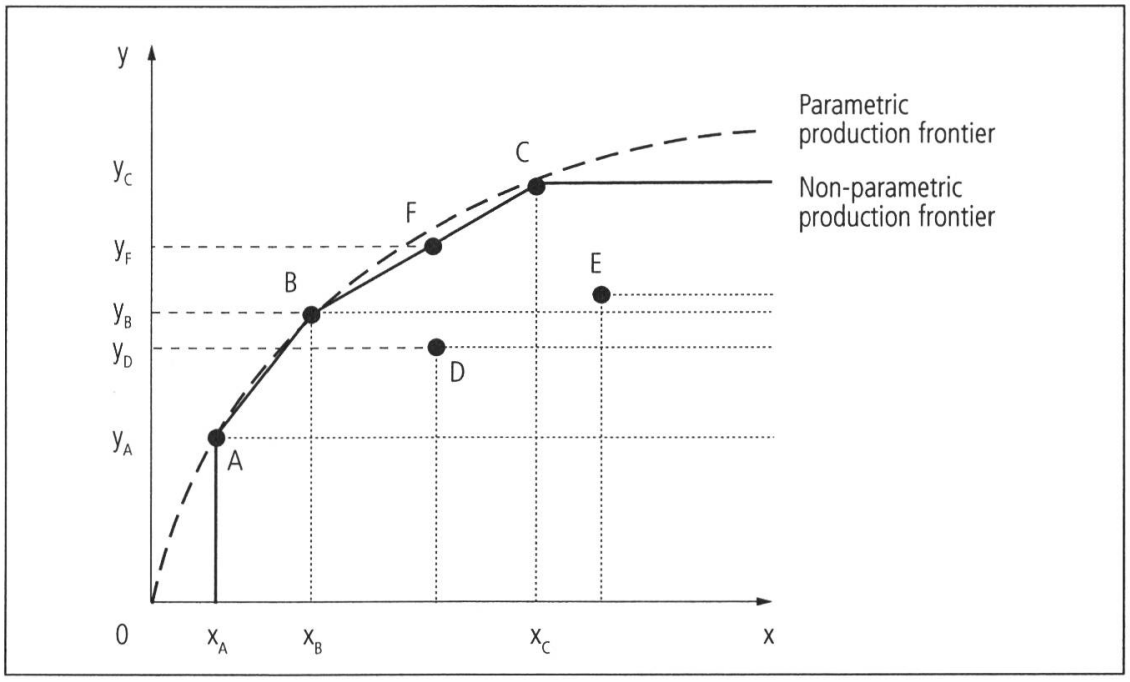
Figure 2 plots several DMUs – *A, B, C,* etc. – in a two-dimensional space, where the quantities of inputs (x_A, x_B, x_C, etc.) used by these DMUs are reported on the horizontal axis *0x*, and the quantities of outputs produced (y_A, y_B, y_C, etc.) are reported on the vertical axis *0y*. These data allow us to estimate the empirical production possibility set, i.e., the combinations of inputs and outputs that are feasible. To do so, some assumptions are made. The first one – called the assumption of strong disposability of outputs – states that if an amount of output (say, y_B) can be produced by a DMU (say, DMU_B) which uses a given quantity of inputs (x_B), then this DMU_B can also produce *smaller* quantities of outputs keeping its input usage constant. The logic behind this hypothesis is that it is possible to offer fewer outputs than those that are currently provided with given resources. This assumption allows us to draw vertical lines connecting each DMU in the graph to the horizontal axis *0x*; the points situated on these lines are feasible and belong to the production possibility set.

The second assumption – that of strong disposability of inputs – states that if a DMU (e. g., DMU_B) can produce a given quantity of output (y_B) employing a quantity of input (x_B), then this DMU is also able to produce the same quantity of output (y_B) with a *larger* quantity of input. This assumption allows us to draw horizontal lines starting at the points which represent the DMUs in Figure 2 and continuing to the right. All points situated on these segments belong to the feasible production set.

A third very common assumption – that of convexity of production possibility set – says that linear combinations of DMUs are feasible. For example, if the data includes two DMUs such as DMU_B and DMU_C, then DMU_F should be feasible. Note that the quantity of output produced by DMU_F is a weighted mean of outputs produced by DMU_B and DMU_C, and the quantity of inputs used by DMU_F is a weighted mean of the inputs used by DMU_B and DMU_C.

8 To become more efficient, inputs of a given DMU should be decreased and/or outputs should be increased.

Figure 2: Data, production possibility set and best practice production frontier



By combining the above assumptions[9] we obtain an estimate of the production possibility set, i.e., the set of all pairs (x_i, y_i) that are feasible, where i designates a DMU_i ($i = A, B, C$, etc.). The "north-western" boundary of this set is called the best practice production frontier. No DMU situated on this frontier may increase the output production without increasing resource usage, nor decrease the resource usage without decreasing the output. This frontier may be estimated either in a non-parametric way (e. g., by using the Data Envelopment Analysis technique) – the piecewise-linear frontier is obtained –, or by parametric methods that use additional assumptions on the shape of the frontier (e. g., Cobb-Douglas, translog), which becomes "smooth".

Once the production frontier is estimated, the efficiency measure may be computed.[10] The proposed measure reflects the distance from each DMU to the production frontier. If the DMU is situated on the frontier, it is considered to be efficient; if the DMU is distant from the frontier (what is meant by "distant" is explained below), it is considered to be inefficient. The more a DMU is distant from the frontier, the larger its inefficiency.

9 An assumption regarding the nature of returns to scale is also needed. Other hypothesis may also be added; alternatively, weak disposability of inputs or outputs may be assumed.

10 In practice, the production frontier and the measures of efficiency are estimated in one single step.

As stated above, the objective of efficiency evaluation is to determine whether the resources (inputs) were deployed in the optimal way. Economic efficiency measurement literature considers the usage of resources to be "optimal" if a *maximum* feasible amount of outputs is produced with a given amount of inputs. For example, in the case of an employment office, it could be considered that the office is fully efficient if it generates the maximum possible number of hires, given the number of job-seekers registered at this office and the number of REO job counsellors working there.

The computation of efficiency level may be illustrated by means of a graph. In Figure 2, the DMU_D could increase its output production keeping its input usage unchanged: by doing so, DMU_D would place itself at point F, which belongs to the best practice frontier. Accordingly, a measure of the so-called technical efficiency can be computed for the DMU_D as the ratio of the actual output level (equal to $0y_D$) to the maximum output level (equal to $0y_F$ for DMU_D). This measure is called *output-oriented technical efficiency score* and is denoted throughout this paper as E; for DMU_D, $E_D = 0y_D/0y_F$. By construction, the efficiency score is equal to or smaller than 1. It measures the feasible increase in output that a DMU could attain keeping its resource usage constant if the output was produced efficiently. If E is equal to 1, the DMU is fully efficient; if E is smaller than 1, e. g., $E = 0.8$, then the DMU is inefficient and it can increase its output by $(1 - 0.8)/0.8 = 0.25$, i.e., 25% of its actual output level, using the same resources.[11] Efficiency score computation may be generalised to the case of DMUs transforming multiple inputs into multiple outputs.

The measure obtained in this way can incorporate the effects of exogenous variables on efficiency. In the REO case, these may include individual characteristics of the unemployed workers registered at REO, such as qualification, gender, age, etc. The issue of returns to scale may also be analysed – this leads to important conclusions regarding the optimal size of an employment office.

The methodology outlined above possesses several advantages. First, the score E measures the *relative* efficiency of DMUs. This feature represents an advantage, because in order to measure the *absolute* efficiency, the performance of real DMUs should be compared to that of some theoretic benchmarks. These may not be realistic enough, whereas in the case of relative efficiency, the performance is compared to that of real units. Second, each inefficient DMU is compared to some similar units, called *efficient benchmarks*, which may be identified and reported. For example, the inefficient DMU_D in Figure 2 is projected in point F lying on the best practice frontier. Point F is obtained as a linear combination of DMUs B and C. Therefore, the unit D can probably improve its performance by discovering

11 Since the efficiency measurement techniques classify the DMUs into two groups, either efficient DMUs or inefficient ones, some authors consider that these techniques represent a special case of discriminant analysis (Retzlaff-Roberts, 1996).

what these efficient DMUs *B* and *C* of similar size are doing differently. Very importantly, this feature may help to initiate the process of exchanging the best management and operation practices among DMUs.

Several techniques of efficiency measurement rely on the idea outlined above. This study employs three methods termed Data Envelopment Analysis (DEA), directional distance functions (DIR), and Stochastic Frontier Analysis (SFA). The first two methods – DEA and DIR – are non-parametric; the third method – SFA – is a parametric one.

In the DEA analysis, all four performance indicators for employment offices were employed, corresponding to four transition flows on the labour market that may be influenced by a REO (see Figure 1). The DEA model answers the question of whether the number of hires registered at a REO can be increased, keeping unchanged the number of entries into long-term unemployment as well as the number of unemployed workers losing their unemployment insurance benefit (UIB) entitlement, and the number of re-entries into unemployment. The DIR analysis is quite similar to DEA, except for the fact that only two goals are included in the model (the number of hires and the number of re-entries into unemployment). Furthermore, this time we suppose that the REO may become more efficient by either increasing the number of hires, or by reducing the number of re-entries in unemployment, or by doing both. Finally, the SFA model takes only one goal of employment offices into account – the number of hires. Hiring should be increased to improve efficiency. The three models also account for the number of job counsellors working at the employment office (i.e., REO's labour input) and the number of unemployed job-seekers registered at the office.[12] The influence of exogenous operating environment on the performance of REOs is also accounted for by using regression-like techniques.

4 Data

The data used in this study were provided by the Swiss State Secretariat of Economic Affairs (seco). They pertain to two periods: April 1998–March 1999 (12 months), and November 2000–December 2001 (14 months). For the first period, the monthly data were averaged over 12 months and cross-section DEA and DIR estimations for 132 regional employment offices were performed. For the second period, monthly data were used and SFA panel estimations were performed for 76 REOs.

12 This is to prevent the "size effects" which may render an employment more efficient than an other simply because the first one is larger than the second one, and reports more hiring because of its important size.

Table 1 provides summary statistics on the variables used in this study for the data set of the first period. It not only shows the great variation in the goal variables among REOs, which in part mirrors the size of the pool of unemployed facing each REO, but also in the composition of unemployment benefits recipients, the available resources, as well as their labour market environment.

For instance, even taking the size of employment offices into account, it is worth noting the great dispersion in the activity variables of employment offices. For instance, the total number of sanctions ranges from 0.41 to 158.9 per month and per REO while that of counselling sessions performed per month ranges from

Table1: Descriptive statistics

Variable	Mean	St. Dev.	Min.	Max.
Number of UIB* recipients per REO	1048.0660	1027.7010	74.0000	8945.2500
Number of job counsellors per REO	15.4489	12.9707	0.4167	95.1667
Number of exits from unemployment	150.7027	121.3583	15.9167	897.3333
Number of entries into long-term unemployment	26.0524	28.2881	1.3333	254.0000
Number of persons losing UIB entitlement	26.3479	24.3989	2.0833	152.4167
Number of re-entries into unempl. in 4 months	12.1623	11.2425	0.7500	83.2500
Unemployment rate in canton in 1999	2.6019	0.9241	0.5080	5.1340
Percentage of Swiss UIB recipients	0.5738	0.0957	0.4039	0.8294
Percentage of foreign UIB recipients with B permit	0.1267	0.0401	0.0378	0.2568
Percentage of foreign UIB recipients with C permit	0.2743	0.0777	0.0711	0.4122
Percentage of foreign UIB recipients with A permit	0.0240	0.0177	0.0000	0.0959
Percentage of foreign UIB recipients, other permit	0.0013	0.0023	0.0000	0.0159
Percentage of UIB recipients who occupied a high hierarchical position in the last job	0.5589	0.1090	0.2869	0.8951
Percentage of job seekers who worked in their last job in sectors subject to cyclical fluctuations of economic activity**	0.2443	0.0786	0.1376	0.5660
Percentage of women	0.4513	0.0484	0.2584	0.5868
Number of unemployed per job counsellor	71.7756	49.9655	20.2414	565.0001
Number of sanctions	30.1540	27.0797	0.4167	158.9167
Number of days where UIB were cut off	332.9350	272.1412	8.3333	1348.7500
Number of counselling sessions per month	238.1869	244.9511	11.8333	2047.8330
Number of intermediate earnings programmes	286.1787	232.8250	2.5833	1610.5000
Number of ALMPs	260.3744	191.0729	7.5000	994.6667
Number of days where UIB were cut off per UIB recipient	0.3792	0.2547	0.0321	1.4894
Number of counselling sessions per UIB recipient	0.2468	0.1109	0.0584	0.5635

Notes: The data represents monthly averages for the period April 1998–March 1999 for 132 regional employment offices. * UIB states for Unemployment Insurance Benefit. ** These include: construction, retail selling, hostelry, restaurants.

8.3 to 1348.8, a difference which cannot be accounted for solely by the number of UIB recipients registered at the office. Taken in proportion to the number of UIB recipients, counselling sessions can be as much as ten times more frequent in the highest ranking REO compared to the lowest. Similarly, taking normalised figures for the number of days where UIB are cut off, the ratio is 50 to 1. The local labour market conditions, that we capture by the cantonal unemployment rate, exhibit important differences too: the canton with the highest unemployment rate faced a situation more than ten times worse than the canton having the most favourable unemployment rate. This highlights the crucial fact that "outside" conditions have a direct influence on the relative performance of the REOs in successfully placing job-seekers into the labour market, an aspect which clearly cannot be ignored in measuring the efficiency of REOs. REOs may also face very different workforces, more or less skilled workers, more or less women seeking part-time or full-time jobs, different numbers of foreign workers, varying occupations, etc. For example, the lowest proportion of women job-seekers in a REO is 25.8% while the highest is 58.7%. This heterogeneity observed in the composition of the labour force faced by REOs makes it crucial to account for these differences in measuring the relative performance of employment offices.

5 Empirical Results

This section presents the main results obtained using the methods described in Section 3, which enables the efficiency scores of REOs to be estimated and employment offices ranked on the basis of their relative performance. Guidelines are also provided as to how inefficient REOs can improve their own performance with the same level of resources by looking at "comparable" REOs. Next, the question of the optimal size of employment offices is discussed, and finally the various methods to measure efficiency presented in Section 3 are compared.

5.1 Efficiency scores and efficient benchmarks

Table 2 illustrates the results for some of the employment offices. The upper panel presents the score reached by five inefficient REOs as well as their respective benchmarks. The lower panel reports 5 efficient employment offices with their 100% score and the number of times they appear as "peers", or benchmarks, for other inefficient REOs.

For instance, the first employment office, whose identification number (ID) is 92, produces 93.27% of its potential output. The numbers in the third column show the identification numbers of REOs that are efficient benchmarks for inefficient offices. Some of these efficient REOs appear in the lower panel of Table 2. The notion of benchmark, or peer REO, is best grasped by recalling Figure 2, where

Table 2: Efficiency scores and benchmarks for some employment offices: illustrative example

REO ID number	*Efficiency score*	*Efficient benchmarks (REOs)*
92	93.27%	45 (0.03) 88 (0.97)
93	90.94%	43 (0.16) 51 (0.30) 55 (0.55)
94	83.72%	27 (0.04) 43 (0.67) 58 (0.16) 87 (0.13)
95	77.61%	43 (0.04) 51 (0.22) 58 (0.37) 60 (0.37)
96	87.43%	27 (0.02) 43 (0.32) 51 (0.06) 58 (0.60)
...	...	...

	*Efficient REOs**
13	100.00% 1
24	100.00% 2
27	100.00% 43
43	100.00% 56
45	100.00% 3
...	... ...

Note: * The right-hand column (bottom panel) shows the number of times these offices appear as efficient benchmarks for inefficient offices.

inefficient REO 92 would be on point D, while efficient REOs 45 and 88 would respectively be located on points B and C. The efficient level of output of REO 92 would correspond to y_F in Figure 2. This output level is a linear combination of the outputs produced by REO 45 and REO 88, where the former has a weight of 0.03 and the latter has a weight of 0.97. This is the interesting aspect of the results, because identification of benchmarks offers the inefficient REOs the opportunity to see what the more efficient offices are doing differently and to learn the best operating practices from them.

5.2 Returns to scale

The literature focusing on technology and efficiency frequently examines the nature of returns to scale. This concept refers to the relationship that can be inferred between total output and the size of a firm. Returns to scale are said to be increasing (decreasing) if allowing the size of the production unit to vary equiproportionally induces changes in output which are more than (or less than) proportional. If the technology exhibits constant returns to scale, the size of the production unit is irrelevant: two DMUs will produce the same total quantity of output whether they are isolated or merged together. In the case studied by this paper, the question of returns to scale of REOs is quite important because substantial

gains can be made if returns to scale are not made constant by adequately merging REOs into larger offices or breaking them down into smaller offices, depending on whether returns to scale are increasing or decreasing.

The ATAG model does not allow returns to scale to be measured. Two of the three models that were estimated in this study are able to provide information on the nature of returns to scale of REOs: the DIR model (estimated using the first period) and the SFA model (estimated on data from year 2001). Among the 132 REOs considered in the DIR model over the first period, 124 of them exhibit decreasing returns to scale. The others have either constant or increasing returns to scale.

5.3 Comparison of efficiency measurement among various models

We now turn to the comparison of performance measurement through the various methods discussed in Section 3. Parametric and non-parametric methods are compared and, usually, strong rank correlation coefficients are found across models, although some differences are noticeable in the estimated means and variances of the scores.

For each period the ATAG results were compared to the three alternative models, namely to the DEA and DIR models for sub-period April 1998 to March 1999, and to the DEA and SFA for the year 2001. The scores were adjusted to their respective means for meaningful comparisons to those obtained by ATAG.

Table 3 below provides some results associated with each model. The DEA and DIR models give very similar results. With the DEA method, the average efficiency score was 0.846. This means that on average REOs could have increased the number of hires by 15.4% (= 1 – 0.846) if their resources had been used in a fully efficient way. For the DIR model, the mean efficiency score is very similar (0.862), and it is a little lower with the SFA model (0.828). In order to compare

Table 3: Number of employment offices ordered by relative performance with three different models

Normalised efficiency score	*DIR*	*DEA*	*ATAG*
< 95	33	56	25
95–100	20	23	39
101–105	23	18	28
> 105	45	26	28

Note: The mean efficiency score for each model is normalised to the value of 100. The data refer to the period from April 1998 to March 1999.

these scores to the ATAG model, these values have been normalised to 100 in Table 3, which shows, for each model, the number of REOs being found in each score category associated with the premium/penalty rule first suggested in *Accord ORP/LMMT/autorité cantonale* (2000; 2003).

The differences are quite substantial in this respect. The number of REOs performing at least 5% better than the average varies between 26 for the DEA model and 45 for the DIR model, while the figure is 28 for the ATAG model.

Although interesting, these figures do not reveal whether the bulk of REOs appearing the least efficient according to the DEA scores also appear as the least efficient according to the scores estimated with the other models. In order to gain a more precise idea on this matter, Table 4 shows the matrices of rank correlation coefficients for the various models.

For the first period, there exists a strong rank correlation between the two models used in our study, while it is much lower when they are compared to ATAG's results. However, note that over this period, the rank correlation coefficients are highly significant statistically. In other words, a non negligible portion of REOs are found in the same score category whichever model is used. For the year 2001, there is patently no rank correlation whatsoever between ATAG scores and the two other models, while it is quite strong and significant between the DEA and SFA.

This result is quite interesting as it suggests that an inefficient REO remains inefficient whatever the method used to measure efficiency. However, looking at Table 3, we see that the number of employment offices in each relative efficiency category varies substantially from one method to another. Thus, even if in practice Seco has given up the idea of financial premium/penalty, it would be questionable to reward or penalise REOs according to their efficiency score compared to the average performance of all offices. It would be more advisable to base the possible

Table 4: Spearman rank correlation coefficients matrix for different models (DEA, DIR, SFA, ATAG) in two periods

Period 04.1998–03.1999 Number of REOs: 129				*Period 11.2000–12.2001 Number of REOs: 72*			
	DIR	*DEA*	*ATAG*		*SFA*	*DEA*	*ATAG*
DIR	1.000			*SFA*	1.000		
DEA	0.573*	1.000		*DEA*	0.594*	1.000	
ATAG	0.328*	0.325*	1.000	*ATAG*	0.074	–0.178	1.000

Note : * Statistically significant at the 0.01 level.

premium/penalty scheme on the performance evolution of each REO as compared to their past performance. Such a scheme would reward the offices that were able to improve their scores whatever their initial performance.

6 Conclusions

The goal of the Swiss National Science Foundation Programme 45 was to find solutions to problems related to the Welfare State. In the last decade, unemployment has clearly become a problem of major social and economic relevance in Switzerland, which is mirrored in the recent reforms of the unemployment insurance system. Various tools are available to fight unemployment, and according to Martin and Grubb (2001), public employment system is certainly one of the most important.

Our study (Ferro Luzzi et al., 2003) provides insights into an evaluation of the efficiency of regional employment offices in connecting unemployed job-seekers to the labour market. The estimations of alternative efficiency scores resulting from specification of three different statistical models show that there is considerable room for improving efficiency in the Swiss public employment system, which could lead to a lower level of unemployment. These statistical models allow us to rank the employment offices from the most efficient to the least efficient. According to *Accord ORP/LMMT/Autorité cantonale* (2000; 2003), such a ranking should render the REOs more accountable to public authorities, and motivate them to improve their management practices.

The Swiss employment offices operate in heterogeneous environments and face the populations of unemployed job-seekers which markedly differ from one office to another. The statistical analysis reveals the importance of exogenous variables such as gender, nationality and type of work permit for the foreign workers (which closely mirrors the structure of qualifications), industry, and some other variables, in explaining the efficiency differences among REOs. The measures of efficiency proposed in this study do control for exogenous effects and are designed to account solely for internal mismanagement net of the factors beyond of REO's control.

However, simple ranking of employment offices from the most efficient to the least efficient puts political pressure on the cantons and REOs' managers, but gives no clue on the means to attain better performances. One very valuable feature of the models that were used in our study lies in the possibility of ascribing one or more efficient "peers" to each inefficient employment office. These peers (efficient benchmarks) managed labour market transition flows better in order to reduce their pool of unemployed with the same quantities of resources as inefficient offices. By giving each inefficient REO at least one comparable "peer" REO, the

former can improve its performance by comparing its own operating practices to those of its "peer" REO.

Our results indicate that, irrespective of the method of efficiency evaluation used (either parametric on non-parametric) or the period considered, REOs' activity is characterised by decreasing returns to scale. In other words, after having attained full technical efficiency, small employment offices appear more productive than the large ones, i.e., they produce more "output" per unit of "input". This result is interesting as it contradicts the widespread idea that merging employment offices improves their productivity. The conclusion presented here points toward the opposite direction, namely that employment offices cannot in fact save on fixed costs associated with physical capital (premises and equipment).

This study shows that efficiency evaluation can not only serve the public employment system by establishing the relative performance ranking of employment offices, but also give them the tools and information to improve this performance. The authors believe that this direction is sufficiently promising to pave the way to further research in this area.

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Reihe **«Schriften zur Sozialen Frage»**

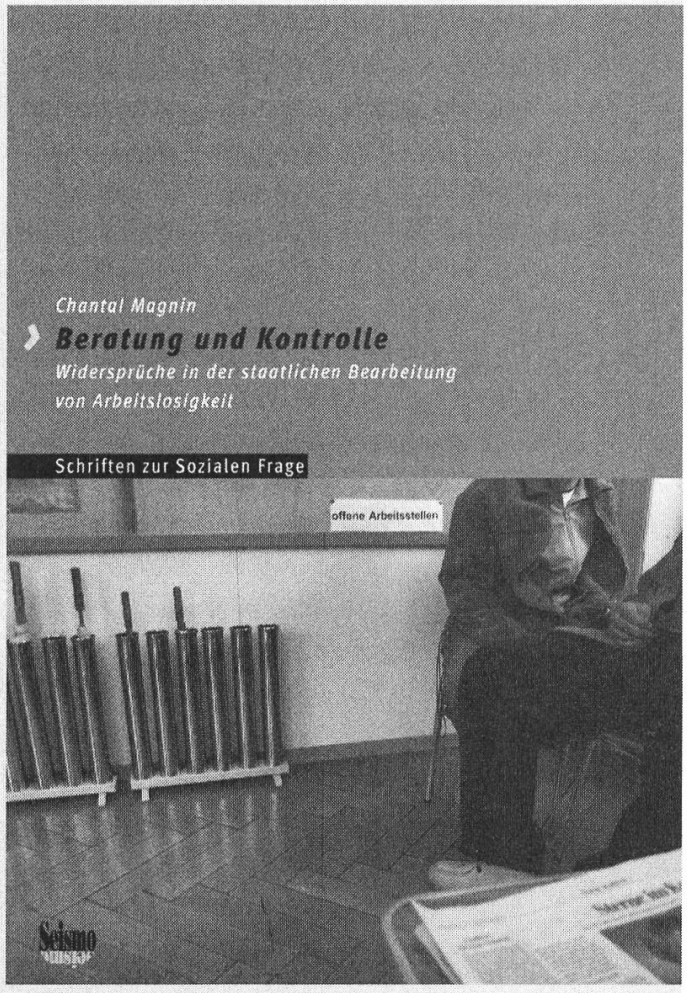
Seismo

Chantal Magnin

Beratung und Kontrolle

Widersprüche in der staatlichen Bearbeitung von Arbeitslosigkeit

Wer in der Schweiz Leistungen der Arbeitslosenversicherung bezieht, ist seit Mitte der 1990er Jahre zur Teilnahme an Beratungsgesprächen in regionalen Arbeitsvermittlungszentren (RAV) verpflichtet. Die detaillierten Rekonstruktionen von Beratungsgesprächen lassen die Widersprüche dieser „aktivierungspolitischen" Bearbeitung von Arbeitslosigkeit deutlich zutage treten: Die mit dem Leistungsbezug einhergehende Verhaltenskontrolle sowie die Androhung von Sanktionen zerstören oft gerade dasjenige, was sie am meisten fördern wollen – die Wahrnehmung von Verantwortung. Weil der Gesetzgeber ihnen misstraut, finden sich Versicherte unversehens in einem Katz-und-Maus-Spiel um die Leistungen wieder. Für die Mitarbeitenden der RAV ist es auf der anderen Seite fast unmöglich, unter den gegebenen strukturellen Bedingungen ein Gespräch zu führen, das die Bezeichnung „Beratung" auch tatsächlich verdient.



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