

Profit, Stefan; Tschernig, Rolf

**Working Paper**

## Germany's labor market problems: What to do and what not to do? A survey among experts

SFB 373 Discussion Paper, No. 1998,94

**Provided in Cooperation with:**

Collaborative Research Center 373: Quantification and Simulation of Economic Processes, Humboldt University Berlin

*Suggested Citation:* Profit, Stefan; Tschernig, Rolf (1998) : Germany's labor market problems: What to do and what not to do? A survey among experts, SFB 373 Discussion Paper, No. 1998,94, Humboldt University of Berlin, Interdisciplinary Research Project 373: Quantification and Simulation of Economic Processes, Berlin, <https://nbn-resolving.de/urn:nbn:de:kobv:11-10060654>

This Version is available at:

<https://hdl.handle.net/10419/61258>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

Germany's Labor Market Problems:  
What to do and what not to do ?  
A Survey Among Experts\*

**Stefan Proft**

Sonderforschungsbereich 373  
Institut für Wirtschaftstheorie II  
Humboldt-Universität zu Berlin  
Spandauer Str. 1, D-10178 Berlin  
Germany

**Rolf Tschernig**

Sonderforschungsbereich 373  
Institut für Statistik und Ökonometrie  
Humboldt-Universität zu Berlin  
Spandauer Str. 1, D-10178 Berlin  
Germany

November 5, 1998

**Abstract**

In this study we collect information on what economists would suggest for reducing German unemployment. This was done by conducting a detailed survey containing 35 measures at two conferences of different kind. One conference was a small conference at the Humboldt-University in Berlin attended by leading researchers on the German labor market, the other the 1998 Meeting of the European Economic Association. We statistically identify a set of measures that is viewed superior to the remaining ones independently of the survey chosen. In a similar way, the responses allow to identify a set of measures that should be avoided. These lists were obtained by recursively applying the Friedman test which is based on individual rankings of survey participants. While the former set of measures contains a selective group of institutional reforms and supply-side policies, the latter is dominated by demand-management policies.

**JEL-classification: C42, E61, J21**

---

\*Acknowledgements: This research was supported by Deutsche Forschungsgemeinschaft via Sonderforschungsbereich 373 "Quantifikation und Simulation Ökonomischer Prozesse" at Humboldt-Universität zu Berlin. We also would like to thank Michael Burda and Bernd Rönz for their advice on designing the questionnaire and statistical issues, respectively, and the participants of the econometric seminar at Humboldt University. Of course, all errors are our own.

# 1 Introduction and Overview

The high level of unemployment and its persistence in European countries has become the most pressing social, political and economic problem in the 1990s. It involves an immense loss of human resources, output and is a source of poverty and inequality (see Snower (1996) for an excellent recent analysis of the European unemployment problem). In addition, it puts much pressure on the generous European social security systems, which were mostly designed in the 1960s, when joblessness was a negligible issue. While some countries, like Denmark, The Netherlands and the UK, have introduced extensive labor market reforms already during the 1980s and managed to reduce their unemployment rates to 4-6 per cent, the jobless rates in other countries like for instance Germany, France, Italy and Spain have risen steadily well above 10 per cent. Figure 1 displays the OECD standardized unemployment rates for the U.S., the U.K. and The Netherlands, as representatives of the first group, and for Germany. It may however be a naive prescription to the second group of countries to pursue the same reforms taken by the former group, since unemployment has a large variety of causes and hence different sets of policy measures may be suitable for different labor markets.

Despite the large volume of high quality publications on solving the unemployment problem, most theoretical and empirical contributions tend at best to come up with vague policy recommendations, which are often not politically implementable. On the other hand, politicians and bureaucrats rather tend to rely on political intuition than on rigorous economic analysis, or on economic advisors, who are in many cases caught in the dogma of either a Keynesian demand-management or a neoclassical supply-side policy. However, there exists a wide spread consensus among economists that fighting joblessness necessitates an approach which integrates a large range of interacting measures and policies. Blanchard et al. (1985) title this a two-handed approach.

Recently, one observes for Germany a stronger involvement of academics in policy. The ‘Petersberg declaration’ which was signed by six economists may serve as a recent example<sup>1</sup>. While such engagement is desirable and important, it reflects only the view of the involved authors. This immediately raises the question what other experts think and recommend. In other words, do there exist views on treating the unemployment problem that are common to a larger number of experts?

It is the goal of this study to provide a first answer to this question by collecting and summarizing the opinions of leading academic experts on the German labor market. As a first step we conducted a survey among 50 prominent labor market economists who work empirically on German labor markets and participated in a conference on “Germany’s Labor Market (GLM) Problems: An Empirical Assessment” which was organized by the Sonderforschungsbereich (SFB 373) at Humboldt University in Berlin at the end of August 1998. The participants were invited based on the quality of contributed papers.

In addition, we conducted this survey among the 807 participants of the annual Meeting of the European Economic Association (EEA) held at the Humboldt and the Free University in Berlin at the beginning of September 1998. Since the number of returned questionnaires was disappointingly low, the EEA sample is by no means representative for the participants of the EEA 1998 Congress and no conclusions on the dominating opinions of European economists should be drawn. We nevertheless include the results here to obtain an impression how they compare to the survey of labor market experts collected at the labor market conference in Berlin a few days earlier.

Technically, the questionnaire lists a range of measures and some general statements that each respondent has to evaluate on an ordinal scale. In addition, the surveys also asked which measures the participants think of as being particularly relevant for the New German States (“Neue Länder”).

For the statistical identification of sets of measures which the participants evaluate as being the most (or least) effective in fighting unemployment in Germany, we used a statistical procedure based on the Friedman test (1937). This test based on rankings allows each respondent to have her own perception of the ordinal scale and is therefore well suited for the present problem.

As a result, we identify sets of policies which are evaluated as being most (or least) effective in fighting German unemployment in both surveys. Moreover, these sets are very similar! Table 2 below lists all measures that are included in the top set. In a similar way, we find sets of measures that should be avoided. Again, they are surprisingly similar across surveys and are shown in Table 3 below. Therefore, the surveys provide a good impression of what (labor) economists identify as being the most pressing problems and possible remedies on German labor markets although it would be presumptuous to claim that the surveys offer an agenda for a labor market reform in Germany.

Section 2 describes the questionnaire and some details on obtained data sets analyzed in this study; section 3 discusses some methodological issues and presents the tests used to evaluate the proposed measures. Finally, section 4 reports results with a short discussion of the findings and section 5 concludes.

## 2 The Questionnaire

The intention of the surveys was to obtain straight and clear expert statements on which measures are viewed the most effective to significantly lower German unemployment by taking advantage of the presence of such a large number of highly qualified economists and labor market researchers in Berlin. Therefore, the questionnaire tries to capture a wide (and fairly exhaustive) range of measures which have been proposed in academic research, policy and the public. The survey is structured into two main parts, one where the respondents were asked to evaluate 35 measures with respect to their effectiveness to lowering unemployment, within a range of 0=ineffective to 4=most effective. Moreover, the participants could indicate whether these measures are expected to be particularly relevant for the New German States. A second set contains 12 general statements, in which the participants were asked whether they strongly disagree (=0) or strongly agree (=4). The intermediate values signal simple agreement/disagreement or indifference.

The various measures were classified into the six following policy headings:

- tax reduction measures,
- reform of the social security net,
- deregulation and growth policies,
- wage policies,
- labor market regulation/reform,
- active labor market policies (ALMP),
- and aggregate demand policies.

The general statements aim at obtaining a general impression on the main causes of German unemployment, on the degree of optimism for a quick but substantial reduction, the relationship of unemployment and poverty. Since various work sharing schemes have been intensively discussed

in public in Germany, two general statements are devoted to them, followed by three on whether unemployment is thought to be primarily an economic, political or social problem in Germany.

Finally, we included some questions concerning personal and job characteristics. In particular, the respondents were asked to provide information on their age, sex, country of residence, whether they work in (non)academia, their position (or profession) and their field of expertise. Given the smaller number of conference participants, we restricted these questions to whether the country of residence is Germany or not in the survey undertaken at the GLM conference. Moreover, the GLM questionnaires offered some space for comments and suggestions which was hardly used by the participants. The complete EEA questionnaire is found in the Appendix.

The questionnaires contain some *cross-checks* to test for the "rationality" of respondents. For example, one question concerned a higher centralization of the wage bargaining process, another proposed decentralization. Or in the first category "tax reduction measures" we asked whether a lower tax on labor income and a reduction of consumption taxes would be effective in fighting unemployment. Giving both a high priority would not be realistic on budgetary reasons.

The survey form was included in the welcome package of the conferences, and participants were asked to drop their questionnaire into one of several ballot-boxes at the conference venues.

The number of returned questionnaires was 39 for the GLM and 48 for the EEA conference. In both samples, some survey participants did not answer all questions so that there are 25 and 38 complete questionnaires of the GLM and EEA survey, respectively. Due to the small number of returned questionnaires, we did not much investigate differences between subsets in each sample as they become very small. For example, there 29 (8) and 18 (28) participants residing inside (outside) Germany, respectively.

### 3 Methodological Issues

The goal of our survey is to identify the most promising measures to defeat unemployment. Therefore, we are interested in ranking the 35 measures and in determining the statistical significance of a derived ranking. To do so, one has to find suitable statistical methods for summarizing the individual responses. In the present survey each question has to be evaluated on the ordinal scale 0,1,2,3,4. Therefore, methods requiring cardinal scaling like the mean are only meaningful if one additionally assumes linearity. We proceed without the linearity assumption.

A ranking only makes sense if there exist statistically significant differences in the evaluation of the measures. Therefore, the first step is to test the null hypothesis of no differences in the proposed measures. This can be done by using the Friedman test (Friedman, 1937)<sup>2</sup>. Its null hypothesis postulates that each of  $N$  subjects/participants assigns a purely random ranking to  $s$  different objects/measures. The alternative states that there is some agreement among the subjects.

In its original form, the Friedman test requires that each subject delivers a complete ranking of the  $s$  objects. A complete ranking excludes rankings where two or more objects are viewed as being equal. Since asking for a complete ranking of 35 measures would have substantially lowered the response rate, the questionnaire only asks for an incomplete ranking since at least some of the 5 possibilities 0,1,2,3 or 4 for evaluating each question have to be used several times. If one observes the same value for different objects, one obtains ties. A standard way to treat ties is to compute midranks for the tied objects. Midranks have the nice property not to change the total sum of ranks which is  $1/2s(s+1)$ . As an illustration consider in Table 1 the responses of one subject to

Table 1: Ranking the response of one subject

measure	A	B	C	D	E	F
response	0	4	3	3	2	1
ranking	1	6	4.5	4.5	3	2

six measures denoted A to F and where the responses of measure C and D are tied. Here, the ranking with the highest value identifies the best measure.

At this point we would like to emphasize once more that directly comparing the responses of two subjects may be misleading since different participants may apply the ordinal scale differently. This can be avoided by comparing individual rankings instead using the Friedman test statistic. It is based on a simple idea. If the participants answer completely randomly, then the average rank  $R_i = 1/N \sum_{j=1}^N R_{ij}$  of all (mid)ranks  $R_{ij}$  over all participants  $j = 1, 2, \dots, N$  assigned to measure  $i$  should be about the same for all measures  $i = 1, 2, \dots, s$ . In other words, it should be close to the overall average  $R = 1/s \sum_{i=1}^s R_i$ . The Friedman test is now based on the sum of squared distances  $\sum_{i=1}^s (R_i - R)^2$ . After a suitable normalization and adjustments for ties, one obtains the test statistic (see for example Lehmann, 1975, Chapter 6)

$$Q^* = \frac{12/(Ns(s+1)) \sum_{i=1}^s R_i^2 - 3N(s+1)}{1 - \sum_{j=1}^N \sum_{k=1}^{e_j} (d_{kj}^3 - d_{kj}) / (Ns(s^2 - 1))} \quad (1)$$

where  $e_j$  denotes the number of distinct response values used by subject  $j$ , and  $d_{kj}$  denotes the number of observations that are associated with each of the  $e_j$  distinct values  $k = 1, 2, \dots, e_j$ . If the  $N$  subjects rank the  $s$  objects randomly, then the test statistic should be close to zero. Therefore, the null hypothesis is rejected if  $Q^*$  becomes too large. Provided  $sN \geq 30$ , the null distribution can be well approximated by the  $\chi^2$ -distribution with  $s - 1$  degrees of freedom.

If the null is rejected, then at least one measure is evaluated differently from the remaining ones although there may be more. In order to identify the significant differences, we suggest the following procedure. First, one ranks all measures according to their average ranks  $R_i$ . Then, the null hypothesis of random responses is tested with all measures except the one ranked last. If the worst measure is the only one viewed differently from the others, the test should no longer reject the null. If there are more differences, however, the null should be rejected again. One then repeats the modified Friedman test with the next worst measure left until one can no longer reject. The remaining measures can then no longer be statistically differentiated with this test and hence the ranking for those should not be interpreted.

Although this is a sequential testing procedure where one loses control over the overall significance level, wrong decisions do not pile up here. If one erroneously rejects the null and continues testing, then it is very likely to reject the null in the next iterations so that one may expect that the set of no different measures may not become much smaller than the true one. A more severe problem is that the procedure is conditioned on the estimated ranking. Strictly speaking the test results are only valid taking the ranking as given. On the other hand, the procedure is easy. Alternative procedures require to conduct all possible paired comparisons as investigated by David (1963) or McDonald and Thompson (1967).

In analyzing surveys a standard problem is the treatment of missing responses. Since the Friedman test requires a ranking of all  $s$  measures, a missing response of subject  $j$  to one of the  $s$  measures requires the deletion of subject  $j$  from the sample (method a) since one cannot obtain any ranking

of all  $s$  objects. If one is willing to make additional assumptions other treatments are possible that avoid the deletion of subjects. In case of the present survey, one may for example assume that no response means "ineffective" or "strongly disagree" (= 0, method b)), or unconditional average response (= 2, method c)). In the analysis of the measures all three variants are compared.

## 4 Survey Results

### Sets of Measures

We first state the main results which we obtained by applying the statistical testing procedures described in the previous section. They supply sets of measures which the respondents of the questionnaires label as being most (or least) effective in fighting German unemployment. Table 2 lists eight measures that were considered to be the most effective by the participants of both surveys at GLM and at EEA. These measures consist of promoting part-time work, stricter administration of unemployment benefits, more public investment in education and training, reducing social security contributions, enhanced monitoring of the unemployed, increased dispersion of wages, increasing training and qualification programs and deregulating small businesses. The composition of this set of top listed measures underlines the need for a well designed mixture of economic policies for a successful reduction of unemployment.

As can be seen from column three of Table 2, these top measures belong to six different categories of economic policies listed in the questionnaire. One may note that only the categories "social safety net" and "deregulation and growth" are represented twice. Thus, there is not a single category of measures that should be pursued first. It also shows that using a detailed questionnaire has been useful since asking only for the categories would not have provided much information.

Some measures were only top listed for one survey. The GLM participants would like to increase decentralization of wage bargaining while the EEA survey suggests instead to reduce overall wages and unemployment benefit levels.

Table 2: Top ranked measures

Survey	Measures	Category
GLM & EEA	deregulation/promotion of part-time work	Labor market regulation
	stricter administration of unemployment benefits	Social safety net
	more public investment for education and training	Deregulation and growth
	reduction of social security contributions	Tax reduction
	enhanced monitoring of unemployed	Social safety net
	increased dispersion of wages	Wages
	increase in training and qualification programs	ALMP
	deregulation of small business	Deregulation and growth
only GLM	increased decentralization of wage bargaining	Wages
only EEA	reduction of overall real wages	Wages
	reduction of unemployment benefit levels	Social safety net

The two surveys also agree on some economic policies that should be strongly avoided. They are listed in Table 3 and include the reduction of (standard) weekly hours, increased centralization of

Table 3: Bottom ranked measures

Survey	Measures	Category
GLM & EEA	reduction of (standard) weekly hours	Labor market regulation
	increased centralization of wage bargaining	Wages
	more expansionary monetary policy	Aggregate demand
	exchange rate depreciation	Aggregate demand
only GLM	reduction of consumption taxes	Tax reduction
	more expansionary fiscal policy	Aggregate demand
only EEA	incentives for discouragement of overtime	Labor market regulation

wage bargaining, more expansionary monetary policy and exchange rate depreciation. Reduction of consumption taxes and more expansionary fiscal policy is evaluated as being ineffective in the opinion of the GLM participants while EEA survey participants question the usefulness of incentives for discouragement of overtime. Overall, this is a vote against “aggregate demand policies“.

We now turn to a more detailed discussion of the survey results and show how we obtained Tables 2 and 3. In computing the Friedman statistic (1) for testing the null hypothesis of no statistical differences in the recommendation of measures, the average rank  $R_i$  is computed. In Figure 2 all 35 measures are ranked in decreasing order with respect to their average rank obtained from the GLM survey. The average ranks are represented by the thick monotone decreasing line. Note that for the average rank one has  $35 \geq R_i \geq 1$  with 35 being the best. The substantial deviations of the average rankings of the best and worst measures from the overall average 18 underline graphically the statistical rejection of the null hypothesis (all measures being equal) at any reasonable significance level. Moreover, one obtains the desired ranking in a natural way.

Average ranks resulting from the EEA survey are plotted into Figure 2 using a dashed thick line. The null hypothesis (all measures being equal) is also rejected at any reasonable significance level. It is found to be similar to the GLM results although some important differences occur. “Reduction of unemployment benefits“ and “reduction of overall real wages“ are top listed for the EEA survey only while “decentralization of wage bargaining“ is favored by the GLM.

Figure 2 also shows the results on the relevance of the measures for the New German States. The thin solid and dashed lines in Figure 2 denote the percentage of those survey participants who evaluated a measure as 1=relevant. Due to the construction of the variable, it is impossible to obtain an individual ranking and apply the Friedman test. Inspecting the thin solid line for the GLM sample, one finds a strong preference for the “reduction of overall real wages“, followed by “subsidies for low wage earners“, “infrastructure investment“ and “public employment programs“. The EEA survey participants have the same top preference for the “reduction of overall real wages“ but differ markedly with respect to the following ones where they would like to see “more decentralized wage bargaining“. Only the last measure is also included in the top list for GLM of Table 2. This may indicate that solving the unemployment problem in the New States requires somewhat different economic policies.

In order to arrive at Table 2, we applied the iterative procedure based on the Friedman test as described in the previous section to the top ranked measure for each survey being “deregulation of part-time work“ for the GLM and “stricter administration of unemployment benefits“ for the EEA. Then, we excluded measure by measure starting from the bottom until the Friedman test (1) no longer rejected at the 5% significance level. At this point we considered all remaining measures



as being equal. All measures that occurred in both sets for the GLM and EEA are listed in the top section of Table 2.

In order to obtain robust results, the measures included in Tables 2 and 3 represent the intersection of all three missing treatments as described at the end of Section 3. For example, for the GLM survey, the results in Table 2 are identical with missing method c) while this method would include more measures in the top list for the EEA survey. All graphs display results that were obtained with missing method c). The corresponding graphs based on treatments (a) and b)) look very similar and are hence not reported.

The equivalence of measures was not only investigated for the top ranked ones but also for all others by starting the procedure at the second best, third best and so on. Figures 3 and 4 show the results for the GLM and EEA survey, respectively, where for all measures below one single bar the null of statistical equivalence cannot be rejected. The shorter a bar, the more pronounced are the differences of the included measures to the remaining ones. For the GLM survey one finds in Figure 3 that the measures at the top and at the bottom are markedly different while this is less pronounced for the EEA survey results in Figure 4. Note that Figure 4 shows the ranking of measures according to the EEA survey.

Table 3 was obtained similarly with the main difference that the iterations dropped the best measure first, the second best next and so on while keeping the measure ranked last fixed.

So far we have been interested in obtaining results that are representative for each survey or even for both. Alternatively, one may ask whether there exist noticeable differences across subgroups of survey participants. Figure 5 shows the average ranks computed for participants residing either in Germany or elsewhere in comparison to the average ranks for all participants. One finds some substantial differences although they may be due to the small number of only nine members in the group "Living outside Germany". This group emphasizes in particular a "reduction of unemployment benefits". Another cause for the differences could be that participants from outside Germany have different information on German labor market institutions.

Differences between the subgroups Germans and non-Germans are much smaller for the EEA sample. Although one may attribute this to the more balanced subgroup sizes or smaller information asymmetries, this may also be due to predominating views in one subgroup. For example, the largest difference in the average rank is observed for the "introduction of profit-sharing schemes". In any case, all the comparatively large differences refer to measures that are not included in the top list of Table 2.

Much larger variations occur if one classifies the participants by fields of expertise in the EEA sample. Due to the small number of returned questionnaires, we distinguish four major fields: i) macro and international macro (18 respondents), ii) labor (7 respondents), iii) public finance (10 respondents), and iv) others (13 respondents). Figure 7 displays the average ranks for i) to iii) and the overall values. It is found that the labor economists differ most severely from the others. However, when conducting the iterative Friedman procedure on the measure which is ranked first by the group of labor economists, one finds that for 20 measures following on subsequent ranks, the last being "deregulation of small businesses", one cannot reject the null hypothesis of equality. These 21 measures include all measures of the top list of Table 2 except "decentralization of wage bargaining" which is favored by the GLM sample. Similar weak results follow for the public finance experts (24 measures being equal and "more subsidies for R& D" being the last one) and for the international macro group (20 equal measures and "reduction of corporate taxes" just being included). For comparison, the top list includes only 12 measures if all groups are combined.

## General statements

In the general statement section of the questionnaire we asked for the degree of agreement using an ordinal scale. For their analysis ranking is not a useful approach as the level of agreement with each statement being of immediate interest here would be eliminated. We therefore have to resort to simple location measures such as mode, median or mean. So far we have not used such location measures since for their interpretation to be useful one has to assume that all subjects perceive the ordinal scale in exactly the same way. It is the advantage of the ranking methods to avoid this assumption. For a meaningful interpretation of the mean one has additionally to assume that the ordinal scale represents a hidden linear scale. We therefore only present medians.

For the GLM and the EEA samples the medians are displayed in Figure 8. They are found not to differ much across samples. The first five statements focus on identifying the main causes of current German mass unemployment. The EEA survey participants rather strongly agree with blaming high real wages as the main cause. The GLM survey participants exhibit only average agreement. Both samples show medium agreement with relating the labor market problems mainly with deficient supply conditions and the welfare state. There is low agreement with identifying unemployment with deficient demand or too little product market competition. These responses are consistent with those on the single measures. Policies related to the latter two causes do not play a role in the top list of Table 2 presented above.

Despite the existence of useful measures for reducing the burden of unemployment, the participants in the two surveys agree only weakly with the sixth statement by which it is possible to reduce unemployment by 50% within four years. However, one finds medium agreement to the existence of a tradeoff between fighting unemployment and poverty which politicians face.

In Germany there has been a long debate on various modes of work sharing schemes. While there is complete rejection across samples to combining such scheme with full wage compensation, the GLM survey participants are more in favor of measures than the EEA respondents if full compensation is avoided.

The last three statements have a somewhat broader view: across samples unemployment is seen more as an economic than a social problem whereas the political aspect lies in between. In any case, all three aspects are of importance in dealing with the German unemployment situation.

Splitting the samples in subgroups as above may show some of the variability in each sample. As before, by interpreting such subgroup results one is easily misled due to the small number of subjects in each group. Such interpretations may quickly turn out to be spurious since there is no statistical procedure here to safeguard us against noise fitting.

## 5 Final Remarks

In this study we collect information on what economists would suggest for reducing German unemployment. This was done by conducting a detailed survey at two conferences of different kind. One was a small conference attended by leading experts on the German labor market organized at Humboldt University in August 1998, the other one was the 1998 Meeting of the European Association. Despite the different nature of these conferences and despite a low response rate on the latter, we are able to statistically identify a set of measures that is viewed superior to the remaining ones independently of the survey chosen. This set is listed in Table 2. In a similar way, the responses allow to identify a set of measures that should be avoided. They are listed in Table 3. These lists were obtained by recursively applying the Friedman test which is based on individual

rankings of survey participants. This procedure substantially decreases the danger of data mining which is inherent in simple descriptive methods such as comparing medians. Moreover, in contrast to the latter methods, it avoids the assumption that subjects perceive the scale in the questionnaire in exactly the same way.

A surprising finding of our study in light of the limitations of both surveys is the strong agreement on what to do and what not to do: whereas the survey respondents propose a selective set of institutional reforms and supply side measures, demand–management measures are unambiguously judged as inefficient in solving Germany’s unemployment problem. One may take the similarity in results among the surveys as a hint that the selection bias underlying each survey is not dominating our results. It is for that reason that we believe that the presented results are useful.

However, in order to keep the questionnaire tractable, we did not ask for an evaluation of combination of measures explicitly. Therefore it may be possible, that while measures are ineffective as stand–alone policies, they may still be useful to support other reforms. Moreover, to make the results more robust we can only encourage others to conduct similar surveys at other locations, conferences or the like.

## Endnotes

- <sup>1</sup> It has been initiated by Klaus F. Zimmermann at the IZA in Bonn in October 1998. The declaration is available at the WWW address “www.iza.org“.
- <sup>2</sup> A detailed description of the Friedman test with respect to the present application can be found for example in Lehmann (1975, Chapter 6).

## Bibliography

- Blanchard, O., R. Dornbusch, J.H. Drèze, H. Giersch, P.R.G. Layard and M. Monti (1985):* Employment and Growth in Europe. A Two-handed Approach, Brussels: Centre for Economic Policy Research.
- David, H.A. (1963):* The Method of Paired Comparisons, London: Griffin.
- Friedman, M. (1937):* The Use of Ranks to Avoid the Assumption of Normality Implicit in the Analysis of Variance. *Journal of the American Statistical Association* 32, p. 675-477.
- Lehmann, E.L. (1975):* Nonparametrics. Statistical Methods Based on Ranks, New York: McGraw-Hill.
- McDonald, B.J., Thompson, W.A.Jr. (1967):* Rank sum multiple comparisons in one- and two classifications. *Biometrika* 54, p. 487-497.
- Snower, D.H. (1996):* Evaluating Unemployment Policies: Underlying Theories, in: Snower, D.H. and G. de la Dehesa (eds.), *Unemployment Policy: Government Options for the Labour Market*, London: Centre for Economic Policy Research.



<p align="center"><b>General Statements</b></p> <p align="center">Do you strongly agree (4) or strongly disagree (0) with the following statements</p>	<p align="center">Strongly agree=4 Strongly disagree=0</p>				
	0	1	2	3	4
High unemployment in Germany is mostly due to deficient demand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High unemployment in Germany is due to poor supply side policies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High unemployment in Germany is due to high real wages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High unemployment in Germany is due to the welfare state	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High unemployment in Germany is due to inadequate product market competition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is possible to reduce unemployment by 50 per cent within four years	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is a tradeoff between fighting unemployment and poverty	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work sharing with full wage compensation is the solution to Germany's labor market problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work sharing without full wage compensation is the solution to Germany's labor market problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unemployment is primarily an economic problem in Germany	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unemployment is primarily a political problem in Germany	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unemployment is primarily a sociological problem in Germany	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Personal Questions				
• <b>Age:</b>	<input type="checkbox"/> <30	<input type="checkbox"/> 30–39	<input type="checkbox"/> 40–49	<input type="checkbox"/> ≥ 50
• <b>Sex:</b>	<input type="checkbox"/> Female		<input type="checkbox"/> Male	
• <b>Country of Residence:</b>				
<input type="checkbox"/> <b>Academic</b>	<b>Position:</b>			
<input type="checkbox"/> <b>Non-academic</b>	<b>Profession:</b>			
• <b>Field of Expertise (e.g. Labor Economist):</b>				

The results of this survey will be made accessible on the webpage of the National Research Center (Sonderforschungsbereich 373) on "Quantification and Simulation of Economic Processes" at the Humboldt University in Berlin. (<http://sfb.wiwi.hu-berlin.de/lmsurvey.htm>) in due time.

***Thank you again for your participation!***

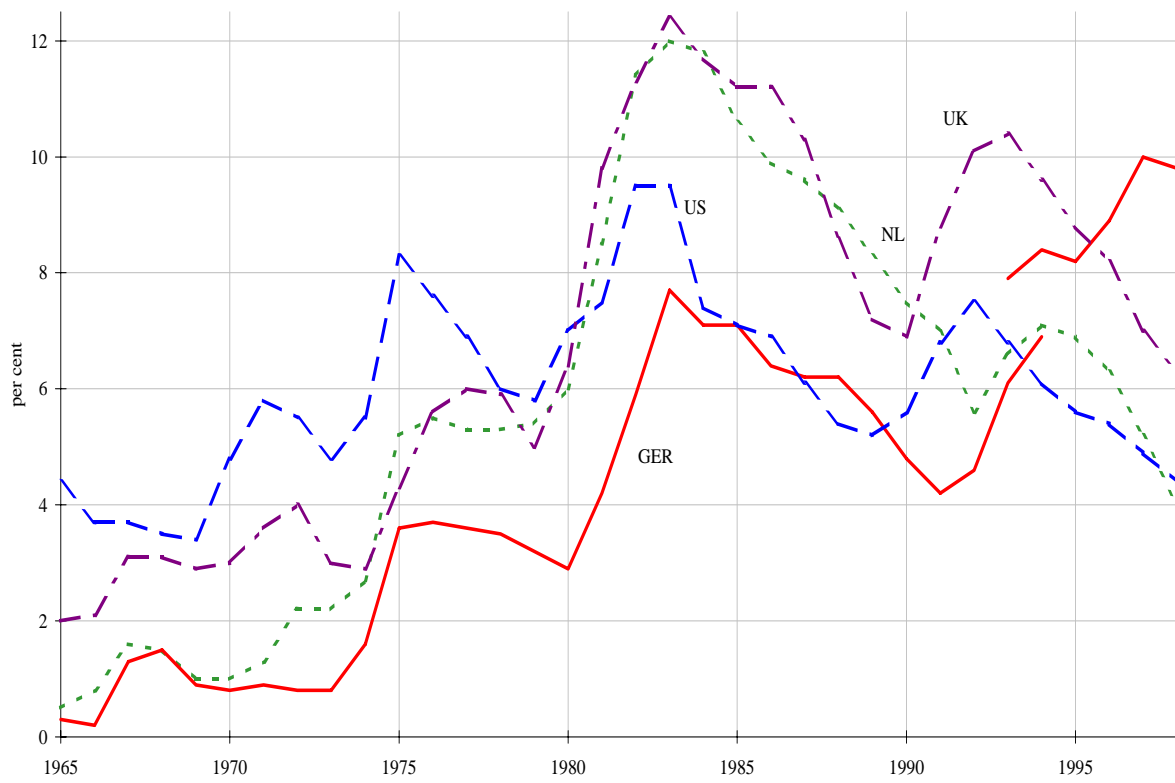


Figure 1: OECD standardized unemployment rates 1965 to 1998 (2. quarter) — *source*: OECD Main economic indicators

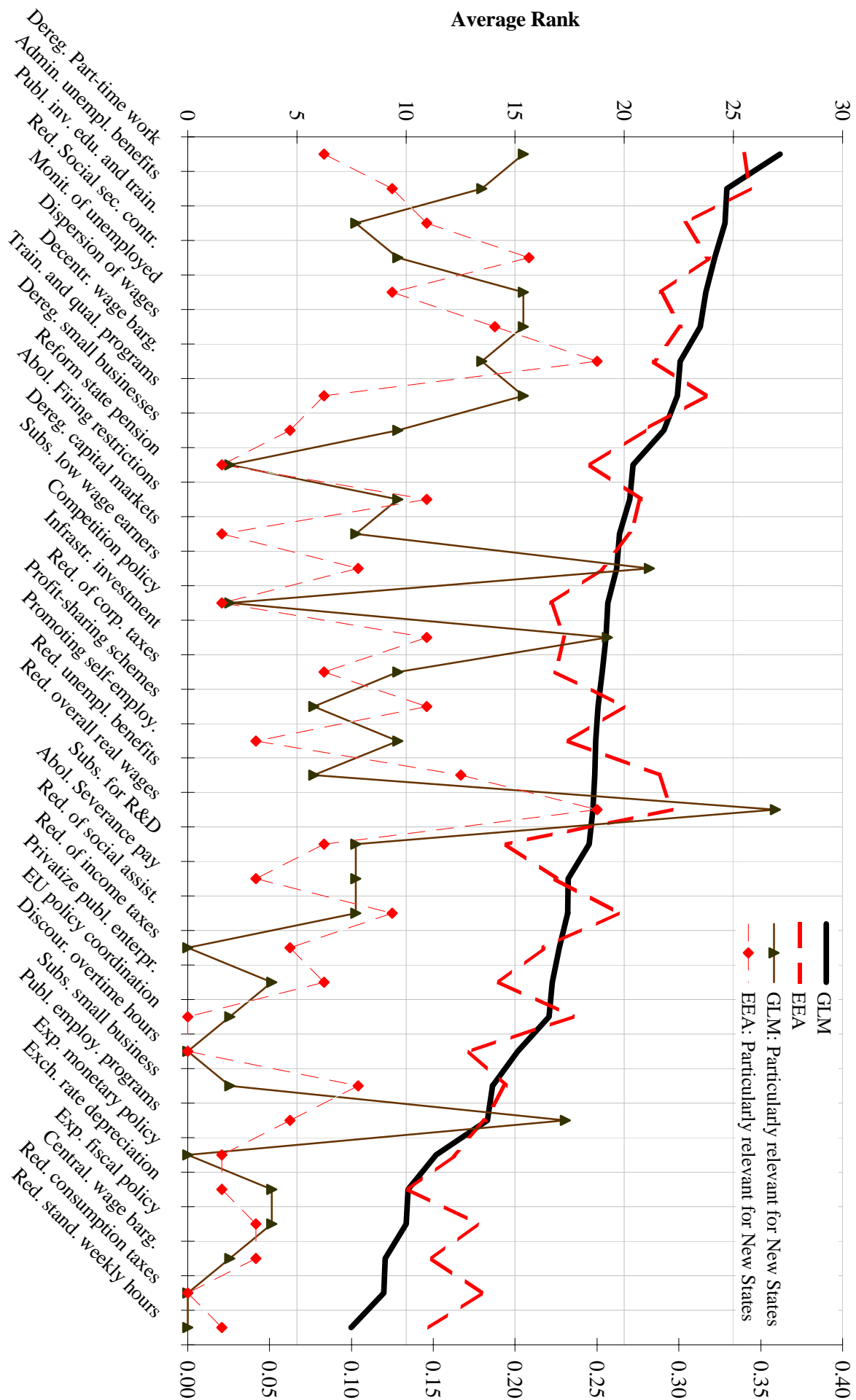


Figure 2: GLM and EEA sample: average ranks (left scale) and average relevance for the German New States (right scale: 0=irrelevant, 1= relevant)

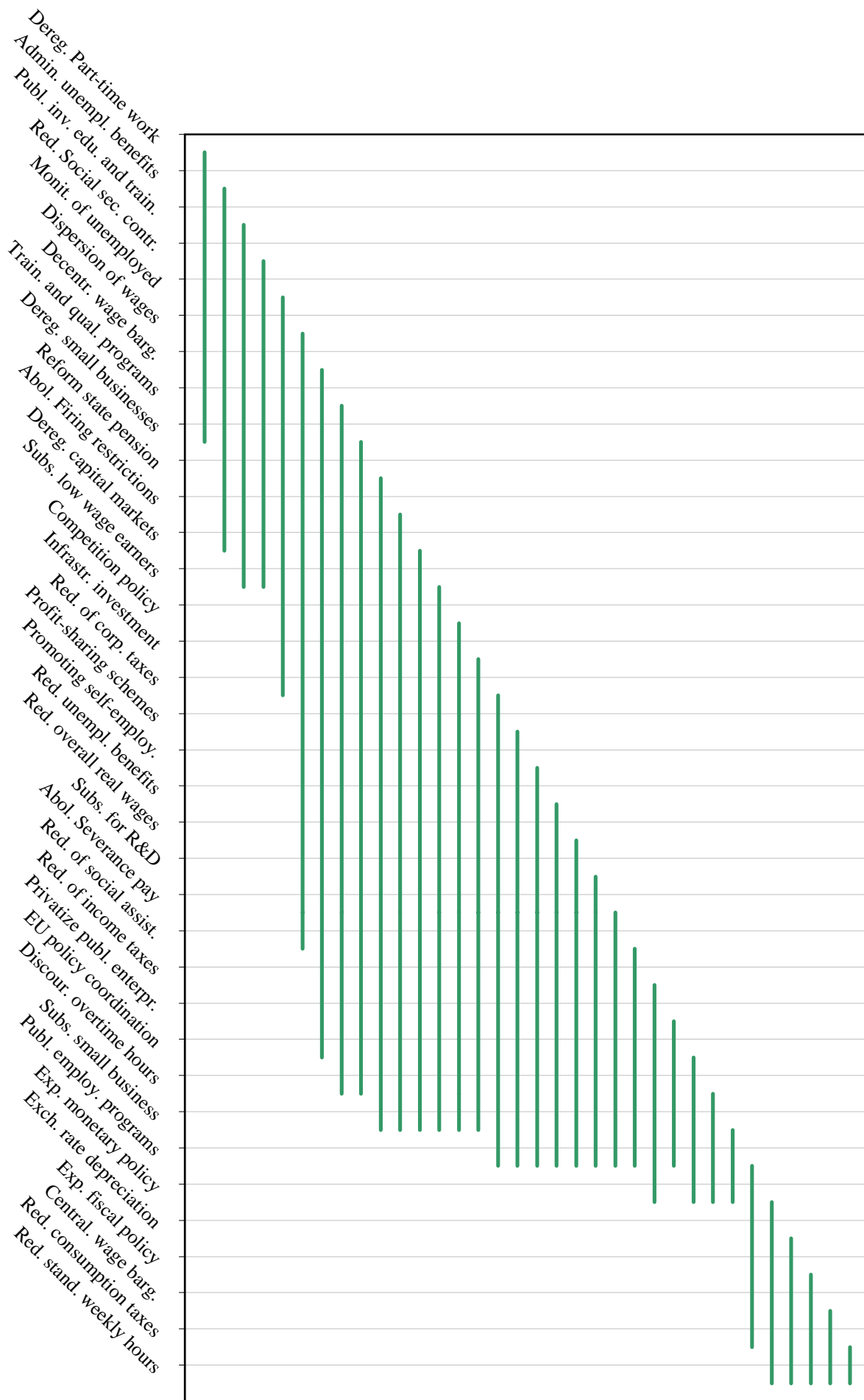


Figure 3: Equivalence of measures for the GLM survey: iterative Friedman test procedure starting at the top ranked measure



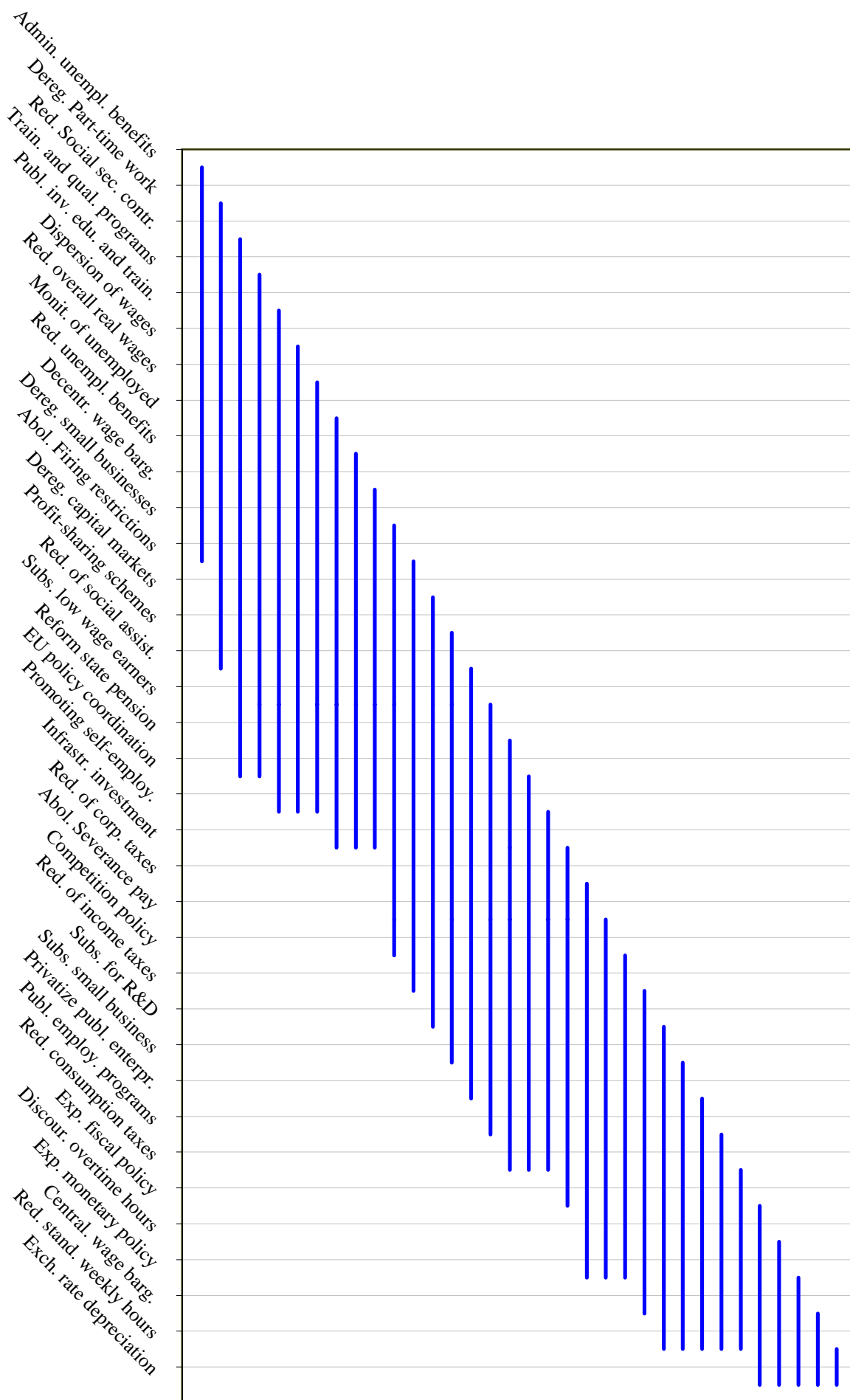


Figure 4: Equivalence of measures for the EEA survey: iterative Friedman test procedure starting at the top ranked measure

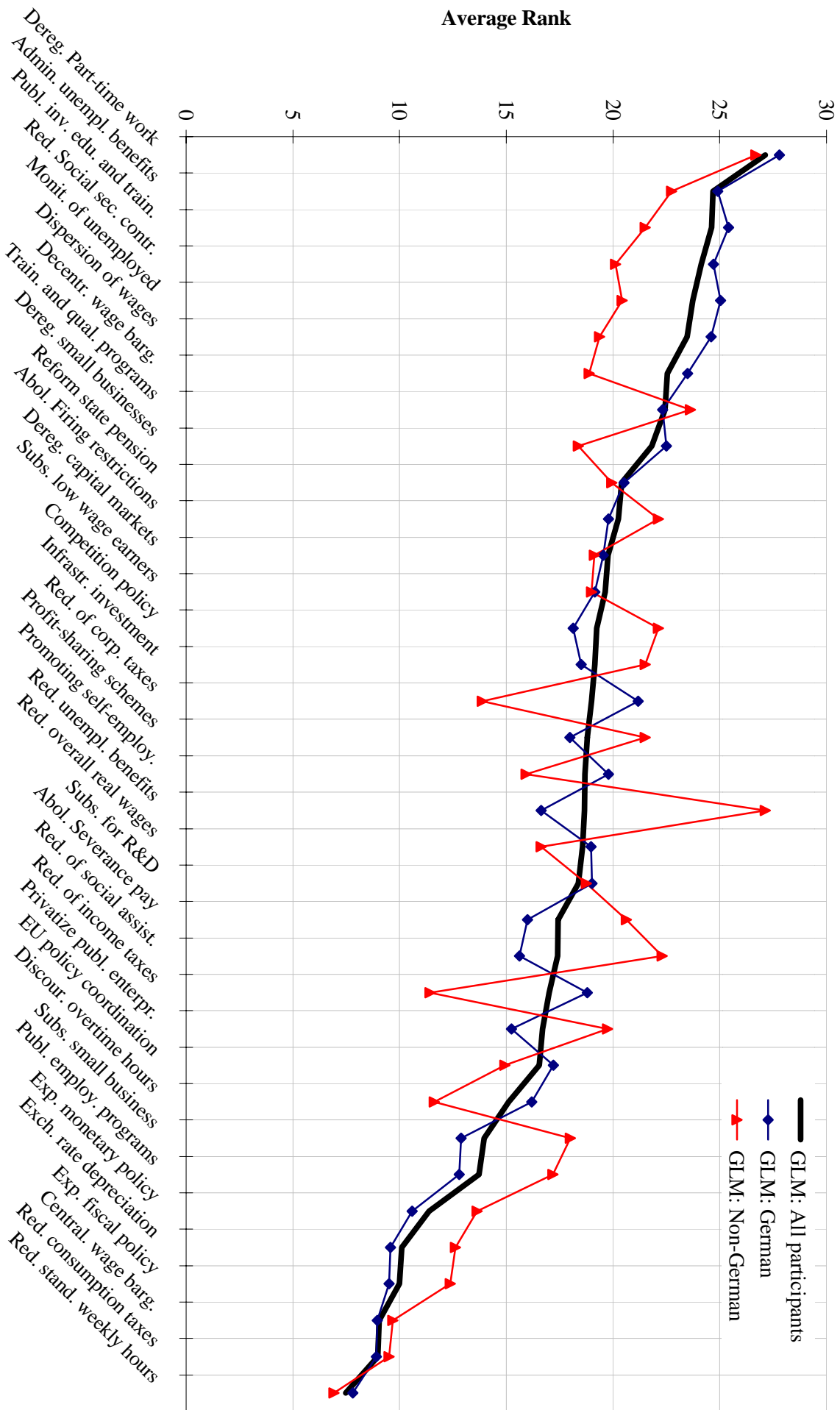


Figure 5: GLM sample: average ranks by country of residence

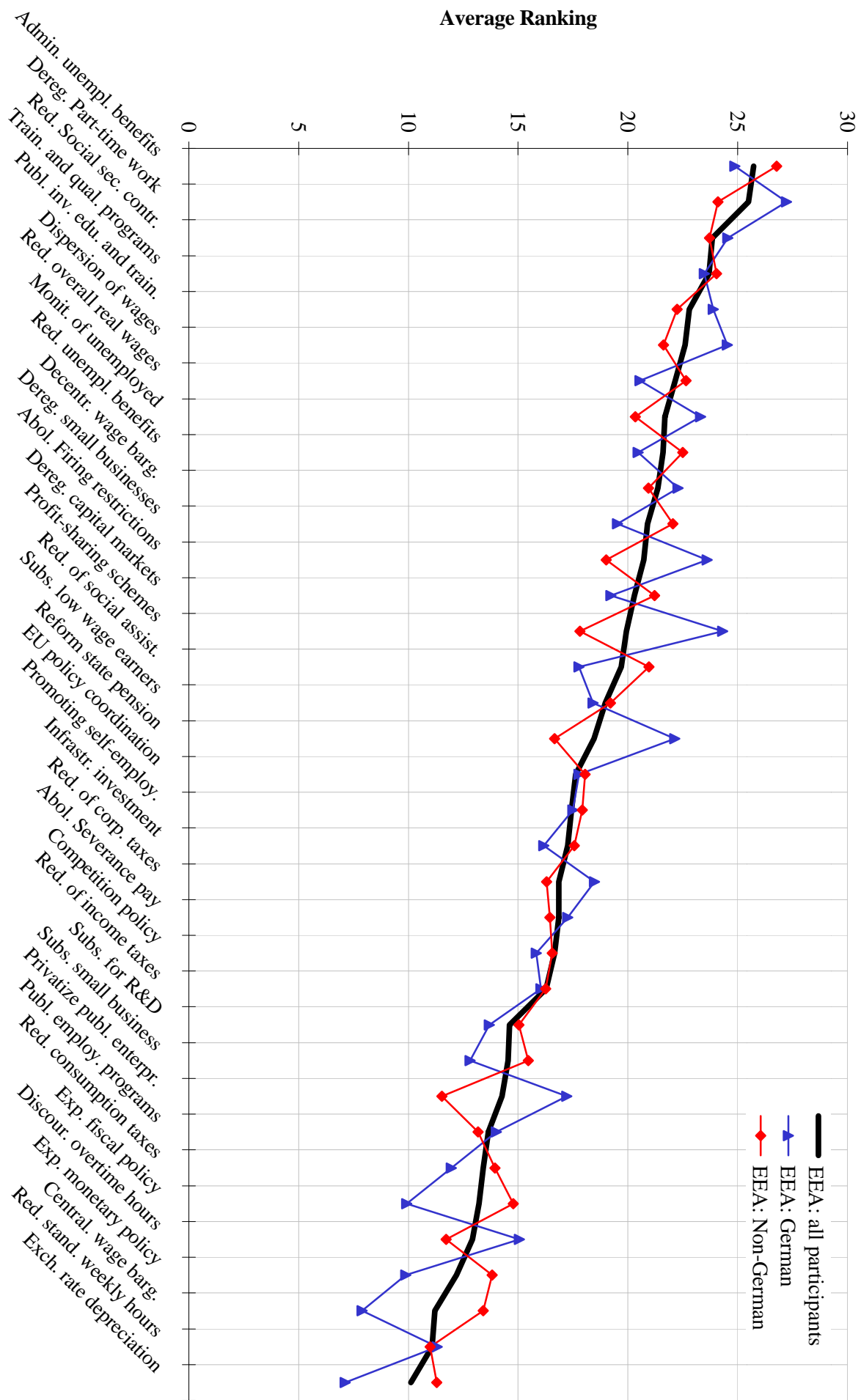


Figure 6: EEA sample: average ranks by country of residence

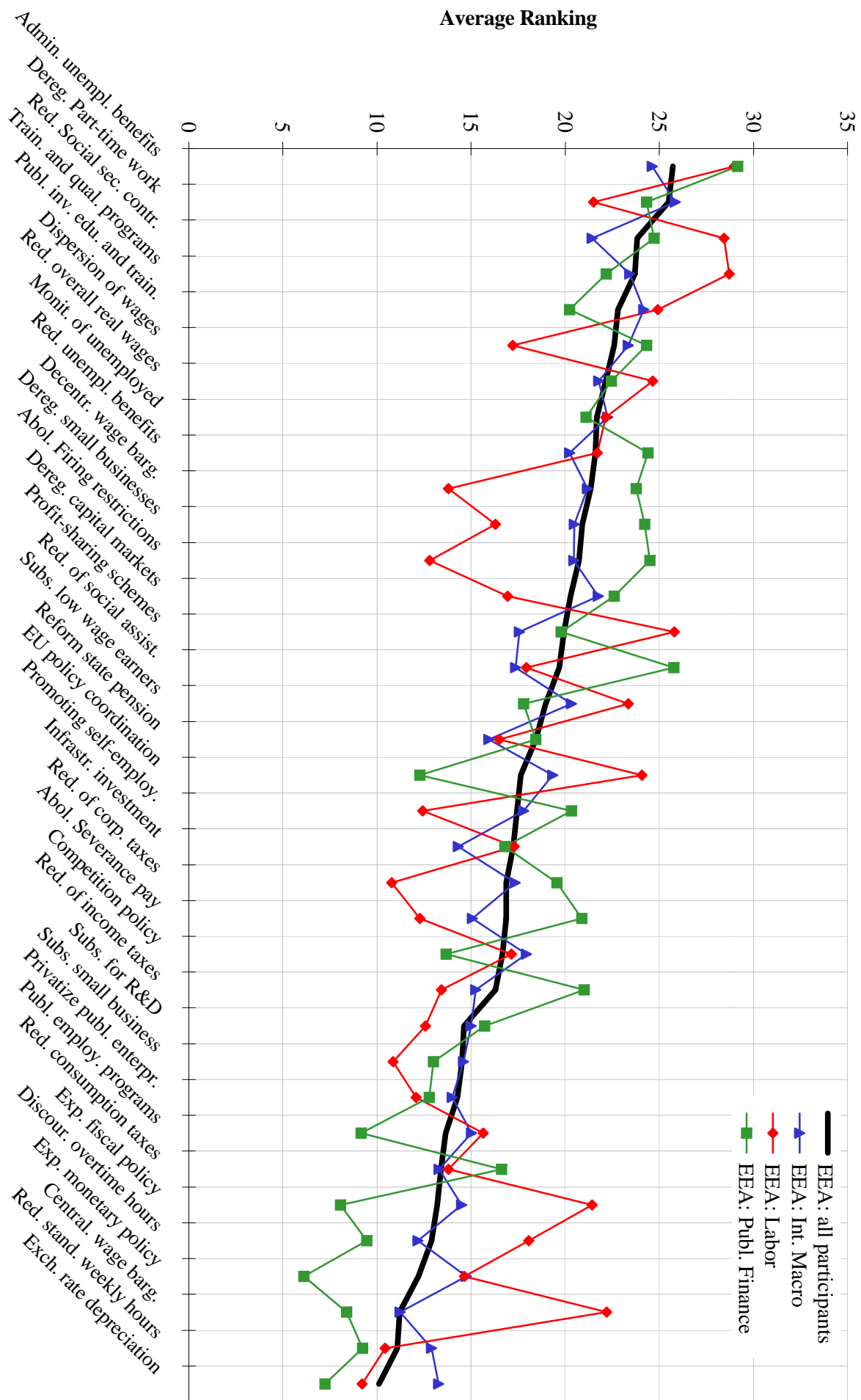


Figure 7: EEA sample: average ranks by field of expertise

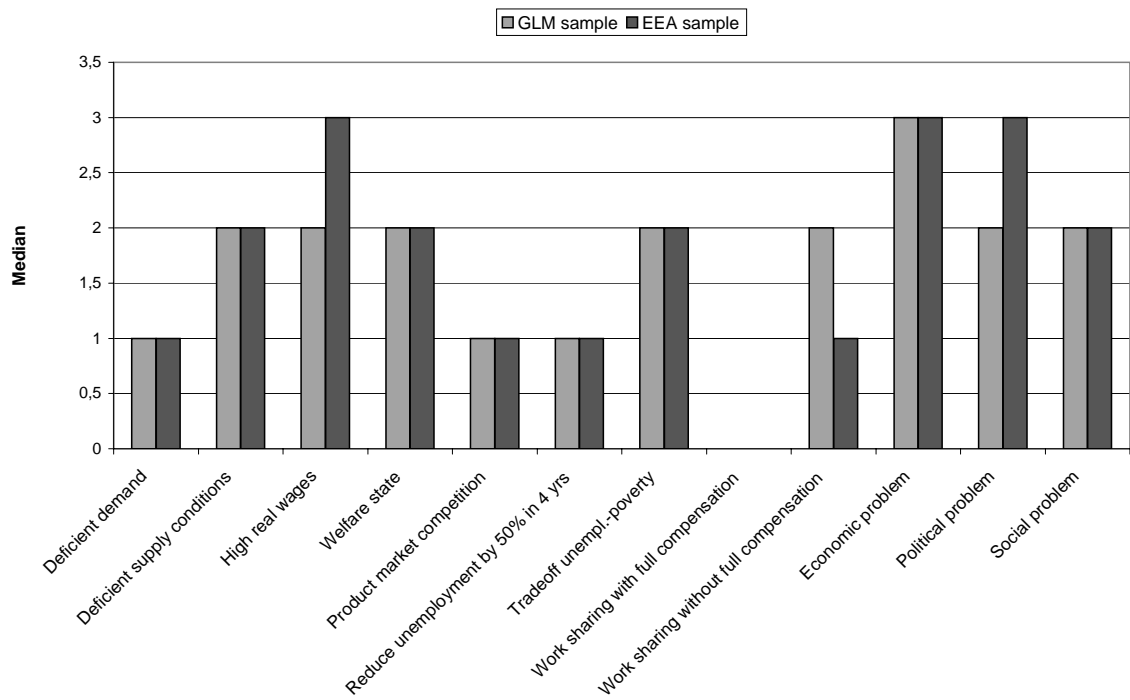


Figure 8: Median response to general statements for GLM and EEA sample