

Evaluation of the Research and Professional Activity of the Institutes of the Czech Academy of Sciences (CAS) for the period 2010–2014

Final Report on the Evaluation of the Institute

Name of the Institute: Institute of Information Theory and Automation of the CAS, v. v. i.

Fields, in which the Institute registered its teams:

Economics and business

Observer representing the Academy Council of the CAS: Pavel Janoušek

Observer representing the Institute: Antonín Otáhal, substitute observer Milan Zajíček

Commission No. 10: Social sciences

Chair: doc. JUDr., PhD., LL.M. Kristian Csach

Date(s) of the visit of the Institute: October 19 - October 23, 2015

Programme of the visit of the Institute: see attached Minutes from the visit

Evaluated research teams:

No. 4 - Department of Econometrics

A. Evaluation of the Institute as a whole

1. Introduction

UTIA has a flat organizational structure. The research is conducted in eight research departments, which are identical with the teams involved in this evaluation. The Commission had to evaluate one small team housed within the otherwise unrelated Institute of Information Theory and Automation of the CAS. The Institute of Information Theory and Automation of the CAS is an institute specialized in mathematics, statistics, computer science, and engineering. For historical reasons it houses a small group of econometricians in its Department of Econometrics. The other seven departments deal with control theory, computer science, pattern recognition, and similar engineering topics. Based on the provided data, the departments have very uneven publication outputs.

The evaluation concentrated on a limited portion of the Institute and might not have a clear and detailed image of the functioning of the entire Institute in order to present effective recommendations.

2. Strengths and Opportunities

According to the information provided the published Journal *Kybernetika* seems to have a relevant impact and a certain attractiveness for foreign researchers, Capable staff (according to the list of scientific awards) that is also well-balanced in terms of their age structure, Sophisticated human resource strategy.

3. Weaknesses and Threats

Administration and financing

Uneven research outputs among the Departments (a clear pattern of distribution)

4. Recommendations

Concerning the Institute as a whole, it might be useful for the Institute to form a scientific advisory committee, ideally composed of distinguished international researchers. This committee could help with suggestions for research directions, and assist with the evaluation of personnel and ongoing research projects.

5. Detailed evaluations

See above

B. Evaluation of the individual teams

Evaluation of the Team No. 4: Department of Econometrics

1. Introduction

The commission had to evaluate one small team housed within the otherwise unrelated Institute of Information Theory and Automation of the CAS. The latter is an institute specialized in mathematics, statistics, computer science, and engineering. For historical reasons it houses a small group of econometricians in its Department of Econometrics. (The other seven departments deal with control theory, computer science, pattern recognition, and similar engineering topics.) The team of econometricians consists of a few very young scholars and one elderly team leader (or 4 aged over 70 according to the provided “non FTE” data).

The team has undergone a restructuring process in recent years which might have already brought particular results including publications in international journals.

The research group contributes to three main areas of research: financial econometrics (intersecting finance and statistics), energy economics and macroeconomics.

2. Strengths and Opportunities

Young and ambitious team

Close to statistics

Existence of strong economic research in Prague

A steady increase in publication activities both in quantity and in quality (IF measured) over the last years indicating a good direction

3. Weaknesses and Threats

Small team

Generation gap, lack of senior researchers

Limited contact with economists

4. Recommendations

The young team could benefit greatly from a closer cooperation with the economists in Prague, as this would provide an environment in which they could put their ambitions into operation.

Recruitment of foreign senior researcher

The team members need a more stable position within the Institute or the CAS as such.

5. Detailed evaluations

Declaration on the quality of the results and share in their acquisition

The current econometrics team consists almost entirely of very young scholars; in particular the age group 40-60 is missing entirely – a phenomenon that we observed at all institutions that we visited. Therefore, it is not very surprising that the team lacks guidance to a certain extent. The present young group shows potential, results and ambition, however, the guidance of senior researcher might be beneficial for publishing in reasonable journals and participating to a certain extent in the training of students at Charles University. Due to the lack of senior researchers their views might seem somewhat too optimistic, though, when it comes to publication outlets and the relation of their work to the broader fields of econometrics and economics. However, based upon the provided data the evaluated team produces a good portion of the Institute's research output (even if compared to other departments) which is promising given the non-optimal age structure of the evaluated team.

Declaration on societal relevance

Econometrics is clearly a highly relevant application of statistics, namely an application to the field of economics and finance. Proficiency in statistics is therefore not enough to excel in this field. It also takes training in and/or close contact with economics, in particular with researchers who identify the problems to be scrutinized by statistical techniques. This aspect is somehow missing, as the team might appear to be rather insulated from the other economists in Prague. As the team evolves into a more stable research entity a closer cooperation will be vital.

Declaration on the involvement of students in research

The team members do appear to participate in student training at Charles University. Apparently they do integrate students into research projects. This may or may not be productive. Unlike apprenticeship, academic training takes extensive coursework by which students can learn best-practice techniques. Student participation in projects may deepen the understanding of material that was learned in class, but it may also degenerate into the exploitation of cheap labor. In the latter case it will not benefit students and will violate rules of good academic conduct. Which aspect dominates in the present case (as in the case of other institutes) was not verifiable for the commission.

Declaration on the position in the international and national context

The team publishes in reasonable but currently second-tier journals (in international context). This may partly be due to the lack of mentorship – the missing generation phenomenon – partly to the rather technical content of the group's research topics. On the one hand proximity to mathematics and statistics can benefit research in the social sciences. On the other hand it may lead into dead-ends that are purely driven by formal tractability, instead of problems of substance.

Declaration on the vitality and sustainability

The econometrics team is young and ambitious. With more guidance and a closer cooperation with the community of users of statistics their work would be sustainable. The current isolation of the group – to a certain extent – might be considered as a problem, though.

Declaration on the strategy and plans for the future

The team could benefit greatly from a closer cooperation with the economists in Prague while not losing their proximity to mathematics and statistics offered by the Institute, as this would provide an environment in which they could put their ambitions into operation not limiting their cooperation with other international institutes. The Commission does not consider its task to promote any institutional changes to the structure of the Academy or the Institutes, but a closer cooperation with CERGE-EI, which after all might be seen as one of the strongest centres for economic research in central and Eastern Europe might be beneficial for both institutes.

Date: February 22, 2016

Commission Chair: doc. JUDr., PhD., LL.M. Kristian Csach