



Evaluating Administrative Efficiency of Universities: The UNICA observatory in Administrative Excellence

A research proposal

HANDOUT

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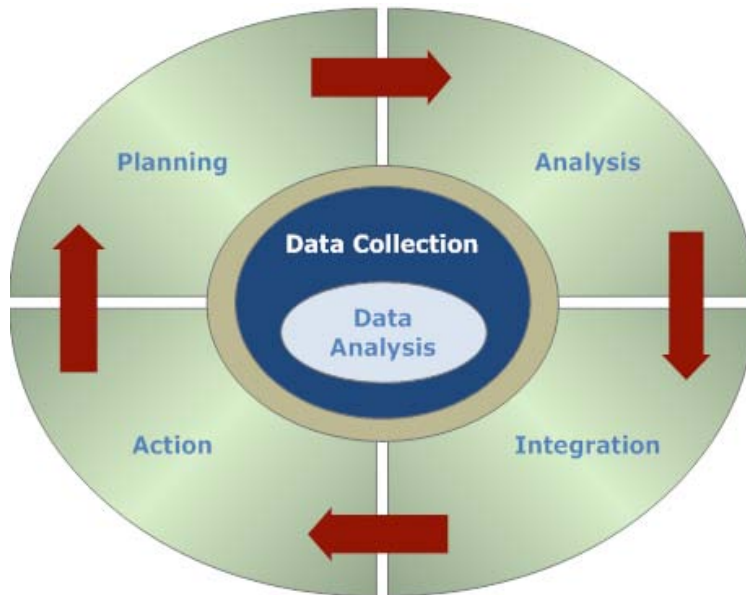
Introduction

- The University of Cyprus and the Athens University of Economics and Business, acknowledging **the importance of the administrative services** in search for excellence, have prepared this proposal that deals with issues related to the **“Evaluation of Administrative Efficiency of UNICA Universities”**.
- This research project is focused on developing a **lean organization**, through the evaluation, comparison and optimization of the administrative operations.
- In this respect, we propose a specific methodology grounded on academic theory and practice for **evaluating UNICA Universities’ administrative services** based on the extensive experience that both Universities have on such research projects.
- The Athens University of Economics and Business and the University of Cyprus also share a **large database of leading European Universities who have participated in a benchmarking study** of their administrative services. In this study, participating Universities have shared information regarding the effective and efficient operation of the academic library, finance, human resources, academic affairs, public relations and other administrative units.
- We trust that the meshing of the academic and practical/consulting experience of the consortium can provide UNICA Universities with a well grounded and sound methodology that will enable each academic institution to effectively assess their performance and compare it with that of other UNICA and non-UNICA European Universities. As such, **UNICA Universities can identify critical areas for improvement in their administrative services, and can effectively reach administrative excellence.**



Phases of the University Evaluation Research Project

- Based on a **four step best practice methodology**, the main steps of the project are:
 - A workshop with interested UNICA universities to further specify the scope of the project and identify critical issues that should be considered (e.g., differences, peculiarities and outliers)
 - Selection of the measures (KPIs) that will be used for evaluation of the administrative services of the UNICA Universities. This selection will involve (a) General University and administration-level measures (e.g., number of students, number of books) and (b) Workload measures (e.g., number of invoices, number of book loans).



- Questionnaire preparation & administration. Two methods will be used to collect data (a) an on-line electronic questionnaire (b) a digital questionnaire (in PDF form).
- Data analysis and diffusion of results to all participating Universities. Advanced statistical analysis including linear and non-linear hierarchical regression, mean analysis, outlier analysis will be performed to analyze the data. Box and whisker plots, spider graphs, bar charts, regression plots etc will be used to present the findings to participating Universities.

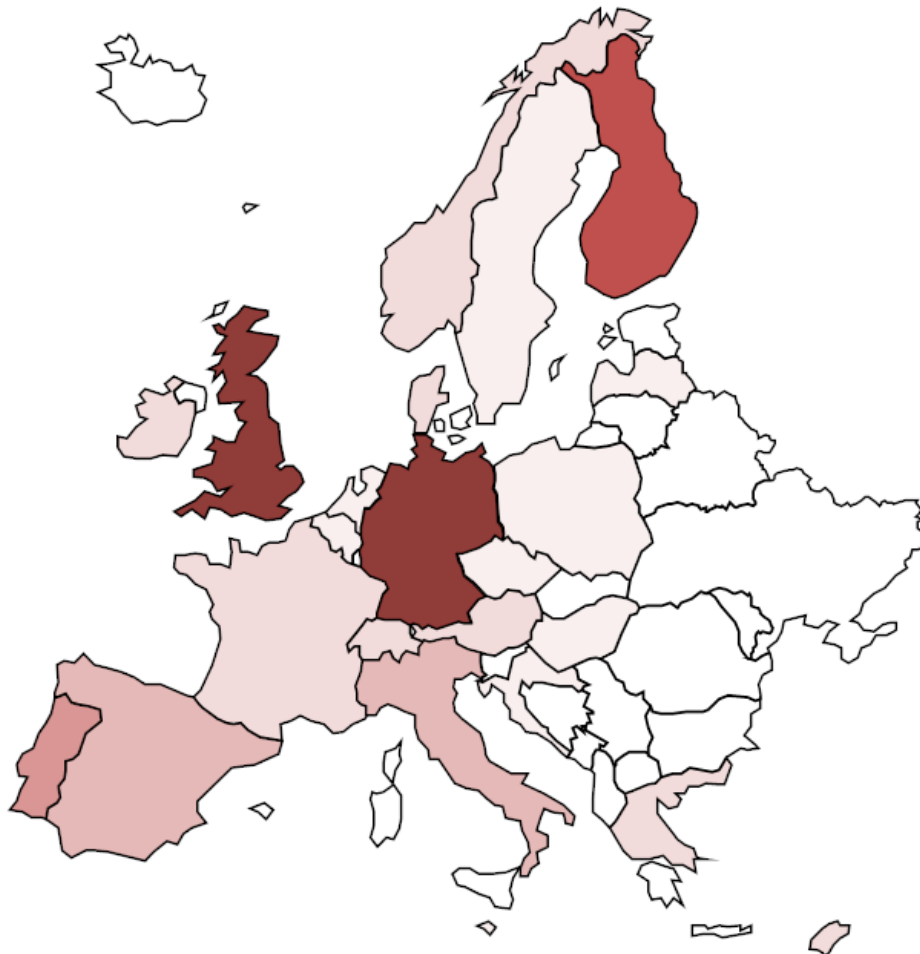
Data Analysis and Results

- The evaluation of the administrative services will be aimed at contrasting the performance of an entity (e.g. university, service) using numeric indicators and to compare the performance of the entity towards other entities. Two comparative methods can be used:
 - **One-to-one** benchmarking: comparing an entity with another one, which is considered to be a best practice, thus illustrating the deviation of the entity in focus from the university that serves as the best practice.
 - **One-to-many** benchmarking: comparing an entity with the statistics of many other entities, better or worse, thus positioning the entity in focus into the range between the best and the worst performance.
- Usual benchmarks are: (1) the minimum value of the index into the sample, (2) the maximum value of the index into the sample, (3) the mean value of the index, (4) the quartile values, and (5) the standard deviation that measures the dispersion of values from the mean.
- Analysis of the results can be illustrated in the form of spider graphs, bar charts, regression plots etc.
- In this context, the consortium will take full responsibility to treat any information gathered from UNICA Universities as confidential and not to disclose any part of it to any third party. On completion of the research project, each participating University will receive an analysis of their position relative to the other institutions without compromising the identity of the other universities.



Previous Experience

- The Athens University of Economics and Business and the University of Cyprus have already performed an administrative services benchmarking study (June - October 2008), with the participation of **52 European Universities** (see map below). This data will be used to compare UNICA universities with other Universities of the database and as such allow for the improved evaluation of the administrative services of each of the UNICA universities.



| | |
|----------------|---|
| Belgium | 1 |
| Croatia | 1 |
| Czech Republic | 1 |
| Hungary | 1 |
| Latvia | 1 |
| Malta | 1 |
| Netherlands | 1 |
| Poland | 1 |
| Sweden | 1 |
| Austria | 2 |
| Cyprus | 2 |
| Denmark | 2 |
| France | 2 |
| Greece | 2 |
| Ireland | 2 |
| Norway | 2 |
| Switzerland | 2 |
| Italy | 3 |
| Spain | 3 |
| Portugal | 4 |
| Finland | 5 |
| Germany | 6 |
| UK | 6 |



Proposed Areas of Evaluation

- The data that will be collected from the Universities could cover the following **indicative administrative areas**:
 - General and Administration Information
 - Library
 - Student affairs
 - Information technology
 - Financial
 - Human resources
 - Public relations and alumni
 - International relations
 - Research programs and projects
 - Technical services (estates office)
 - Internal Audit
- The measures (KPIs) that will be used to evaluate the efficiency and effectiveness of the administrative services will be finalized in a joint workshop with the UNICA Universities.
- Examples of possible general KPIs are: (i) Number of administrative FTEs/Number of Academic FTEs, (ii) Percentage of budget allocated to administrative employees' salaries. Also, possible KPIs covering other administrative services are: (i) Average number of student book loans per month, (ii) Average number of PC's per student, (iii) Budget of research projects / Total administrative FTEs responsible for managing such projects.



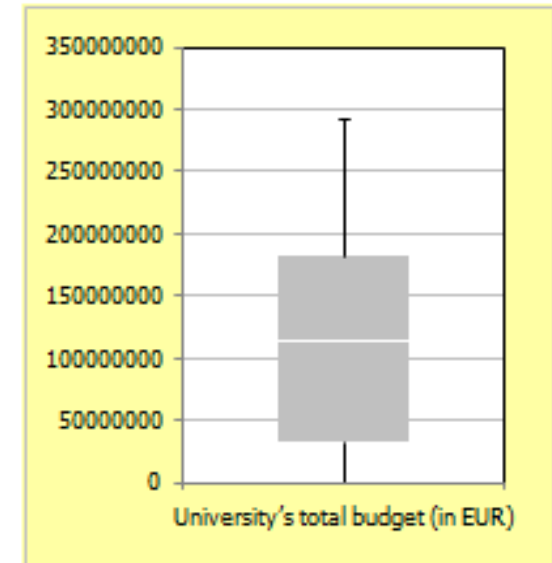
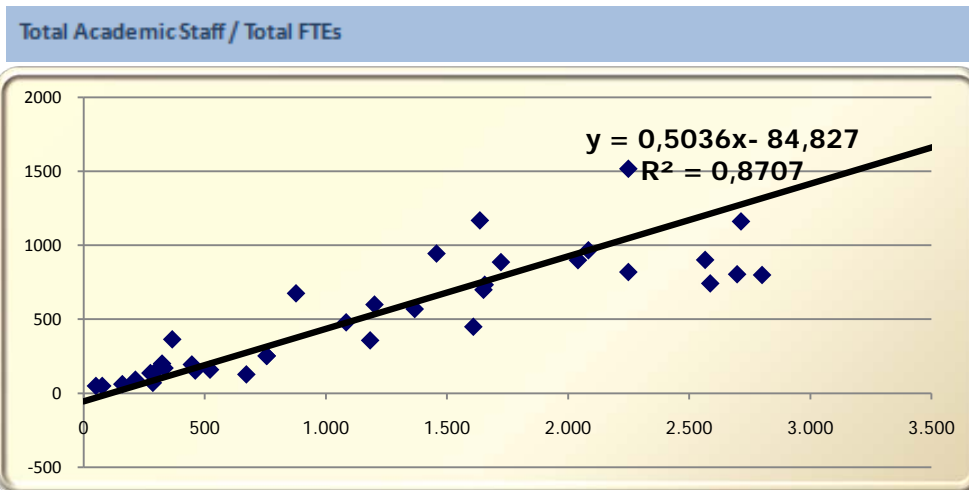
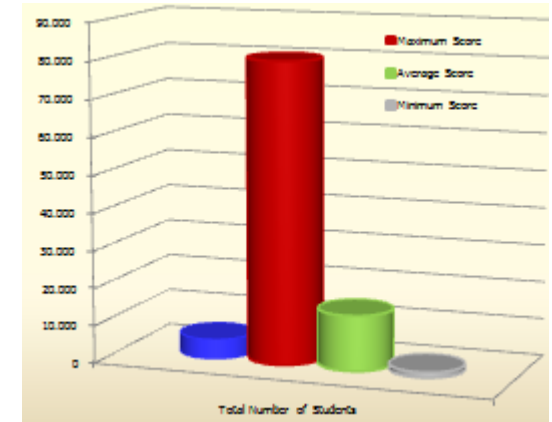
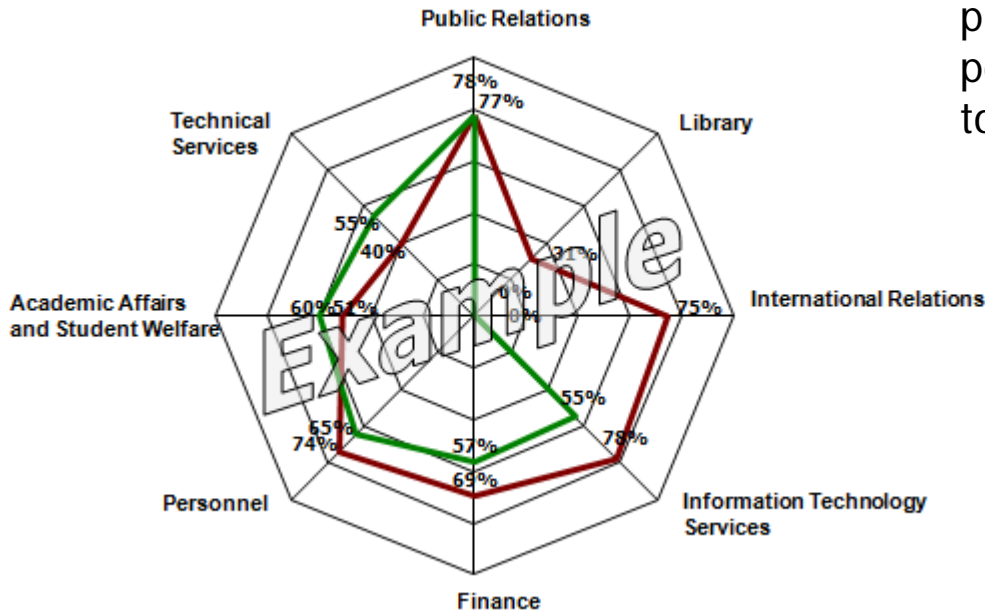
Analysis of Results

- The data that will be collected from the Universities will be analyzed using some of the most academically sound and practical analytical methods. These will involve:
 - **Outlier Analysis.** To determine whether any outliers exist, which should be removed from the sample to avoid distorting the results. These outliers can be determined using univariate, bivariate and multivariate analysis.
 - **Presentation of Data.** Bar charts, spider graphs and box-and-whisker plots will be used to present the data in a user-friendly manner to aid in the interpretation of the data (e.g., for the representation of the min, max, mean number of budget of participating Universities).
 - **Simple Linear Regression Analysis.** Using one independent and one dependent variable, the relation between different variables can be assessed (e.g., the relation between the number of students and the number of administrative staff). Linear regression plots will aid in interpreting the results.
 - **Non-linear Regression Analysis.** Several of the relations between the study variables are non-linear and should be assessed using non-linear regression methods (e.g., the number of staff of the university increases with the number of students, however, this relation is posited to be non-linear, since as the number of students increases beyond a certain point, the increase in the number of staff becomes smaller, i.e., there is a dampening effect).
 - **Multiple Regression Analysis.** The dependent variables that will be considered for analysis usually have complex and multiple relations with the independent variables (e.g., the number of the administrative staff is dependent on the number of students, the number of academic staff, the University budget, the number of departments etc.). These can be tested using multiple regression and useful insight can be provided for participating universities.



Possible Representation of Results

- Several methods will be used to present the findings and the position of each University relative to other European Universities.



Regression Analysis example for Participating Universities

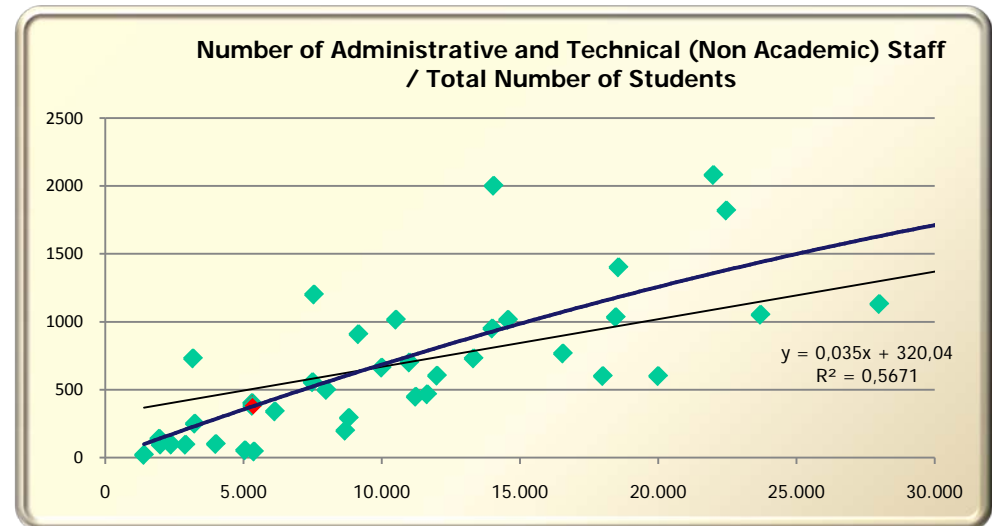


KPI

Total Administrative Staff / Total Number of Students

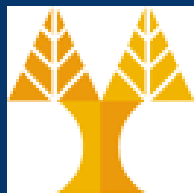


| | |
|------------------|--------|
| b_0 | 320,04 |
| b_1 | 0,04 |
| University Value | 0,07 |
| Deviation | -24% |



Description

- From the above graph, we can determine that the total number of administrative staff follows a concave downward trend, signifying that the number of administrative staff does not increase linearly with the number of students. The trend-line fitted to the data is statistically significant ($p < 0.01$) and seems to explain a large degree of the variance ($R^2 = 0.661$). This implies that the number of students impacts to a large degree (66.1%) the change/variance in the number of University administrative staff.
- Based on the regression coefficients of the trend-line ($y = -6E-07x^2 + 0,0748x - 4,0676$) and substituting for x one can easily determine the number of administrative staff that seems to be needed to service a given number of students (e.g. for $x = 10.000$ students a University is expected to have roughly $y = 684$ administrative employees).







Benefits of the proposed research project

- Participating Universities will receive a customized analytical evaluation and benchmarking PowerPoint report.
- The report will comprise all the statistical analysis along with specific implications and conclusions related to the University and its administrative departments
- The report will focus on the number of administrative staff that each University has allocated to its various departments.
- This report will enable those UNICA Universities that will have participated in the project to:
 - Determine their strategic position relative to other European Universities.
 - Identify administrative areas for possible improvement
 - Define administrative departments that seem to be overstaffed or understaffed
 - Make informed decisions concerning the recruitment of new administrative staff for the various University departments
 - In this respect, participating UNICA Universities will be able to develop a leaner organization and pave the path towards administrative excellence.

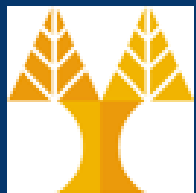


Time-plan and Budget of the Proposed Research Project

- The proposed research project for the evaluation of the administrative services of the UNICA Universities is composed of **four phases** and has a **timeframe of three months**.

| ID | Task Name | | | |
|----|-----------------------|---|---|---|
| | | M1 | M2 | M3 |
| 1 | Phase I. Planning |  | | |
| 2 | Phase II. Analysis |  | | |
| 3 | Phase II. Integration | |  | |
| 4 | Phase IV. Action | | |  |

- In the end of the three months a **summary report** of the findings will be supplied to UNICA, and a **customized analytical evaluation and benchmarking report** will be supplied to all UNICA Universities that will have participated in the survey.
- The proposed project is based on a research initiative undertaken by the Athens University of Economics and Business and the University of Cyprus. **The budget for the proposed research project is only aimed at covering the man-days required to provide UNICA Universities with the customized reports.**
- The total fee per participating University is **5.000 EUR** (provided that more than 5 Universities will participate in the research project), while UNICA must cover the fixed start-up cost of **10.000 EUR**.
- Participating Universities should express their intent to take part in the research project **no later than the 27th of June 2010**.





The University of Cyprus is a dynamic, public institution investing in quality and efficiency. The University's course towards innovation and excellence is already plotted in accordance with European standards of higher education.

It is therefore of great importance to the University, to establish its position as a leading academic and research centre, internationally known for being a beacon of science, culture and civilization, a node of communication and cooperation in the Mediterranean area.

The institution offers 21 departments, funded by a budget of 112.000.000 € (for the year 2007). Studies are conducted at undergraduate level (4016 students), at graduate level (870 students) and PhD level (348 students).

The University's personnel consists of 388 positions of permanent academic staff, 55 positions of academic related staff, 233 positions of research assistants, 40 positions of graduate students as teaching and research assistants, 286 positions of permanent administrative staff and 190 positions of administrative staff and labourers on contract.

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The Athens University of Economics and Business is a distinguished public learning centre which is known for the excellence of its faculty, students and academic programmes. The aim of our University is not only to provide its students with a sound command of theoretical principles and modern analytical tools but also to develop in them certain qualities, such as individual initiative and critical thinking.

Great importance has also been attributed to the development of graduate studies and to regular contacts with Universities and Research Institutes. The institution offers 8 departments, funded by a budget of 8.437.819 euro (for the year 2007). Studies are conducted at undergraduate level (17034 students), at graduate level (846 students) and PhD level (228 students). The University's personnel consists of 187 positions of permanent academic staff, 80 positions of academic related staff, 61 positions of research assistants, 17 positions of graduate students as teaching and research assistants, 70 positions of permanent administrative staff and 129 positions of administrative staff and labourers on contract.

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Thank you for your time and consideration

