

## SOME STATISTICAL RESULTS REGARDING THE EVALUATION OF THE QUALITY OF THE MASTER EDUCATION

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*The article emphasizes aspects regarding the evaluation of the higher education's quality. In certain countries, the questionnaires regarding quality of the activity of HEIs (Higher Education Institutions) are administrated by specialized institutions led by the Ministry of Education or the university associations. The evaluation principles derive from well-known economic and social theories, evolving even evaluation models (see the SERVQUAL model). As a result of the Bologna Treaty (1999), the European Union has the objective to become an international reference concerning the higher education quality and to be more attractive than in the present for students, professors and researchers from other regions of the world. So as to fulfill these objectives ENQA (European Association for Quality Assurance in Higher Education) recommends HEIs to include in their development plans regarding quality aspects five principles described in the article. The practical study refers to the results of a questionnaire applied to the master business students from a Romanian university. In order to assess the level of satisfaction of students in relation to the master programme they are involved in, a questionnaire was applied on a sample of 200 such persons. The responses were then analyzed using multidimensional data analysis methods. Out of these, the present research is based on multiple response analysis. In the questionnaire, students were asked to return their level of satisfaction for different aspects related to the educational process they are involved in. The questions were constructed as five-level Likert items. In this way was insured a connection between answers given at each of the questions assessing the quality of the programme. Only 0.2% of the answers given relate to aspects about which the students were not satisfied at all. These answers represent 3.2% of the number of respondents. 30% of the students were slightly satisfied, returning 57 choices of this type. As one can see, the volume of each group increases with the level of satisfaction. The processing of the questionnaire was made on recent economic theories concerning the quality assurance in the university environment, which are briefly presented in the beginning of the article.*

*Keywords: higher education, teaching quality*

*JEL classification: I21, I23*

### **I. Introduction**

A new master programme has started at the Faculty of Economics and Business Administration, Babes-Bolyai University of Cluj-Napoca. The courses are intended to prepare specialists in European funding audit procedures. The goal of the programme is of major importance now-a-days, taking into consideration the fact that Romania is in the process of structural funds absorption. Having well prepared individuals to work in the field should increase the sums attracted and the quality of the results. This research bring forward partial results of the study. It

aims at presenting a brief description and evaluation of the level of satisfaction of the students in relation to the master programme, based on their demographic characteristics.

## II. Overview

In order to compare the results of the students' evaluation some evaluation schemes have become unitary at national level. In Greece for example, the questionnaires regarding the activity quality of HEIs (Higher Education Institutions) are administrated by the Hellenic Quality Assurance Agency for Higher Education. The basic principles of the evaluation start from the SERVQUAL model, developed in the studies of Parasuraman and al. (1988) and Tsinidou, Gerogiannis and Fitsilis (2010) which define five dimensions for quality: 1) *Tangibles* 2) *Reliability* 3) *Responsiveness* 4) *Assurance* 5) *Empathy*.

As a result of the Bologna Treaty (1999), the European Union has the objective to become an international reference concerning the higher education quality and to be more attractive than in the present for students, professors and researchers from other regions of the world (Commission of the European Communities, 2003). So as to fulfill these objectives ENQA (European Association for Quality Assurance in Higher Education) recommends HEIs to include in their development plans from the quality area the following principles (ENQA, 2005):

- 1) Define the policy and procedures for quality assurance of the quality and standards of their programs and awards, including their systematic review. Institutions need to adopt a culture of quality improvement in all aspects of their educational product.
- 2) Assessment of students using published criteria, regulations and procedures consistently applied.
- 3) Quality assurance of teaching staff, facilities and resources.
- 4) Data processing of information collected through surveys and other sources for the effective management of the institution and customer service.
- 5) Objective and up to date information available to the public about a variety of issues such as degrees and awards offered, financial data, quality assessments etc.

For reaching the quality objectives in agreement to the principles stated by ENQA, HQAA utilize an AHP - Analytical Hierarchical Process (see also Saaty, 1980, Mare et al., 2011). The main goal of AHP „is to classify a number of alternatives (e.g. a set of quality determinants) by considering a given set of qualitative and/or quantitative criteria, according to pair wise comparisons/judgments provided by the decision makers” (Tsinidou, Gerogiannis and Fitsilis, 2010, p.231). Keeping with Jadhav and Sonar (2009) the leading advantages of the AHP method are:

- its capability to provide a hierarchical decomposition of a decision problem that helps in better understanding of the overall decision making process;
- the fact that it handles both quantitative and qualitative criteria;
- its repose on relative, pair wise comparisons of all decision elements; instead of arbitrarily defining a percentage score and a weight for each decision element, AHP allows the decision maker to focus on the comparison of two criteria/alternatives, at a time, thus it decreases the possibility of defining ratings based only on personal perceptions of the evaluators or other external influences;
- AHP is applicable to both individual and group-based decision making (this is often achieved by considering the geometric mean of comparison values),
- it enables consistency checks upon pair wise decision judgments;
- it supports sensitivity analysis to examine the effects of changing values of criteria weights on the final ranking of the decision alternatives.

One of the main important points now at European level is the lifelong learning process. Increasing it has become a major objective in all the treaties and strategies of the European

Union. Another important aspect very much discussed is the correlation between university programmes and the skills the labour market demands. Only with the condition of complying with this “demand” the lifelong learning process will improve. Based on the above mentioned issues, the goal of this research was to see the degree of satisfaction for students involved in the master programmes related to audit at the “Babes-Bolyai” University, Faculty of Economics and Business Administration, Cluj-Napoca, Romania.

### III. Methodology

In order to assess the level of satisfaction of students in relation to the master programme they are involved in, a questionnaire was applied on a sample of 200 such persons. The responses were then analyzed using multidimensional data analysis methods. Out of these, the present research is based on multiple response analysis. Variables having the same answering pattern were grouped and analyzed together in multiple response sets. The procedure was applied in order to emphasize connections that exist between the variables in the set. Moreover, cross correlations were tabulated between the set and other variables under study. The latests are, in fact, demographic features of the students involved in the research.

In the questionnaire, students were asked to return their level of satisfaction for different aspects related to the educational process they are involved in. The questions were constructed as five-level Likert items. In this way was insured a connection between answers given at each of the questions assessing the quality of the programme. Thus, for each question, 1 represented strong dissatisfaction (not at all satisfied) and 5 a high level of satisfaction (extremely satisfied). In the end, they were asked to give some demographic information about them – sex, employment, education, etc.

### IV. Results

From the sample of 200 master students, 10 were eliminated due to too much missing answers that would have distorted the results. Consequently, the final analysis sample consists in 190 persons involved in the programme.

Using the multiple response methodology, variables that assess the level of satisfaction on different areas were put together in a multiple response set. In total, there are 15 variables in the set.

As can be seen in Table 1, most of the students are very satisfied or extremely satisfied with the activities in the master programme. The multiple response analysis deals both with the number of responses and the number of cases. The 190 students gave 2834 answers to the questions in the set. Constructing the ratio, result approximately 15 answers per person surveyed (the value of 1491.6% in the Total row). This means that all of the students gave an answer to the questions under analysis.

**Table 1. Multiple response set for assessing the level of satisfaction of the students in relation to the master programme.**

		Responses		Percent of Cases
		N	Percent	
Level of satisfaction	Not at all satisfied	6	0.2%	3.2%
	Slightly satisfied	57	2.0%	30.0%
	Moderately satisfied	300	10.6%	157.9%
	Very satisfied	925	32.6%	486.8%
	Extremely satisfied	1546	54.6%	813.7%
Total		2834	100.0%	1491.6%

*Source: authors' calculus.*

Only 0.2% (6 in absolute value) of the answers given relate to aspects about which the students were not satisfied at all. These answers represent 3.2% of the number of respondents. 30% of the students were slightly satisfied, returning 57 choices of this type. As one can see, the volume of each group increases with the level of satisfaction. Hence, 300 choices of moderately satisfaction were made. The gap between these three groups already presented and the last two is huge. They account for not even 13% of the responses received. Almost 33% of the answers were given for the very satisfied group, while the majority of more than 50% declared to be extremely satisfied. On average, out of 15 individual choices, a person declared to be extremely satisfied in 8 of them. As stated above, we were also interested to see the connections between the level of satisfaction and some characteristics of the individuals. Out of the demographic variables, two have proved to weight more as importance in the analysis – the average grade of the final exam and the status on the labour market.

The results in Table 2 show that most of the students from the studied master programme are students with very good final grades. When going deeper into the analysis, the most important thing to be emphasized is that there is a direct connection between the level of satisfaction and the average final grade of each individual. Thereby, the higher the final grade, the higher the level of satisfaction. From the point of view of the analysis this is very good. Because persons that have studied well during the faculty period have insured themselves a good background, that allows for objective evaluation in respect to the field and the goal of the master programme.

When assessing the status of the individuals on the labour market, there are two main groups identified – students that do not work at all and students who work more than 20 hours a week. The majority of each group is extremely satisfied with the programme. But, at a closer look (see Table 3) students that work more than 20 hours a week are also to be found more in lower satisfaction groups. This because they may have the expertise to make a better evaluation of the programme than persons that have not yet come into contact with the requests of the labour market. The latter group has given 24 answers of slightly satisfaction in comparison with 12 given by the ones that do not work and 17 by the ones that work less than 10 hours/week. They also represent the majority of the ones that are not at all satisfied by the courses in the master programme.

**Table 2. Assessing the level of satisfaction in respect to the average grade of the final exam for the bachelor programme.**

			Average grade of the final exam			Total
			7-8	8-9	9-10	
Level of satisfaction	Not at all satisfied	Count	1	1	4	6
		% of Total	0.0%	0.0%	0.1%	0.2%
	Slightly satisfied	Count	9	17	30	56
		% of Total	0.3%	0.6%	1.1%	2.1%
	Moderately satisfied	Count	59	76	156	291
		% of Total	2.2%	2.8%	5.8%	10.8%
	Very satisfied	Count	79	211	581	871
		% of Total	2.9%	7.9%	21.6%	32.4%
	Extremely satisfied	Count	167	352	943	1462
		% of Total	6.2%	13.1%	35.1%	54.4%
Total		Count	315	657	1714	2686
		% of Total	11.7%	24.5%	63.8%	100.0%

Percentages and totals are based on responses.

*Source: authors' calculus.*

**Table 3. Assessing the level of satisfaction in respect to the students' status on the labour market.**

			Do you work?				Total
			No	I work less than 10 hours/week	I work between 10-20 hours/week	I work more than 20 hours/week	
Level of satisfaction	Not at all satisfied	Count	2	0	0	4	6
		% of Total	0.1%	0.0%	0.0%	0.1%	0.2%
	Slightly satisfied	Count	12	17	4	24	57
		% of Total	0.4%	0.6%	0.1%	0.9%	2.0%
	Moderately satisfied	Count	82	55	19	143	299
		% of Total	2.9%	2.0%	.7%	5.1%	10.7%
	Very satisfied	Count	265	137	59	456	917
		% of Total	9.5%	4.9%	2.1%	16.3%	32.7%
	Extremely satisfied	Count	638	181	21	685	1525
		% of Total	22.8%	6.5%	.7%	24.4%	54.4%
Total		Count	999	390	103	1312	2804
		% of Total	35.6%	13.9%	3.7%	46.8%	100.0%

Percentages and totals are based on responses.

*Source: authors' calculus.*

## **V. Conclusions**

The partial results presented here have emphasized the high level of satisfaction of the master students in relation to the programme they are involved in. As presented above, out of 15 possible individual answers, on average, more than 8 of the choices were in the group of extreme satisfaction. This means that the professors have been able to have their courses at a high standard, insuring the quality of the master programme analyzed. This pure descriptive analysis is going to be completed in future studies by more complex data analysis methods intended to put into light specificities of the research.

## **Acknowledgements.**

The authors acknowledge the financial support from the POSDRU project number 64076.

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