

# Marketing Research for student education in Engineering and Management

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**Abstract** The paper presents the coordinates of an educational marketing research that has taken place in order to set the grounds of the master offer for the field Engineering and Management, the specializations Industrial economic engineering and Economic engineering in constructions within the Technical University of Cluj-Napoca.

**Keywords** Educational marketing; Investigation

## I. INTRODUCTION

Offer educational reform in the context of the educational system Romanian, must be adapted to the requirements of the labor market national and international.

Increased competitiveness in the employment of a job leads to a responsible approach to training, both from the trainers and customers of these services.

Thus, universities must adopt a policy based on knowledge of supply market target, training and professional development, offer to attract the favorable condition for both parties, a sufficient number of students to be prepared for the labor market work continues to change. Competitiveness will be given individual training on high standards, but also the adaptability to individual requirements, always changing the workplace.

Passive attitude, reactive individuals, the professional requirements should be changed with the proactive, conscious, participative, or achievements of the employer.

Financing of educational services at the state level, must be based on evidence, knowing the real educational needs felt by universities and public, which together provide a feed-back permanently to the adequacy of supply to demand.

The method of investigation has been used as well as the questionnaire as the instrument. This questionnaire has been elaborated by starting from a series of hypothesis, established within the preliminary investigation. Then it has been pre-tested on a pilot sample of 5 subjects who have not been included in the research.

The total investigation of the students in the final years has been desired within the field of Engineering and management. 150 questionnaires have been administrated in Cluj-Napoca, Bistrita and Alba to the students at Industrial economic engineering and Economic engineering in constructions, whose participation was more reduced.

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## II. RESULTS AND DISCUSSIONS

Analyzing the responses of students interviewed to the question: 'In your opinion, further studies on the cycle II the master can help the career?' To see that the answerer 72 (48.00%) considers that helps and 50 (33.33%) consider that will help very much to continue their studies through the Master's chosen career. The remainder, representing (12.67%) believes that studies of the career master degree does not influence or affect the future very least. Notably, the share of 6.00% of the answerer does not realize yet the importance of vocational studies for a master's increased employment opportunities (graphic 1).

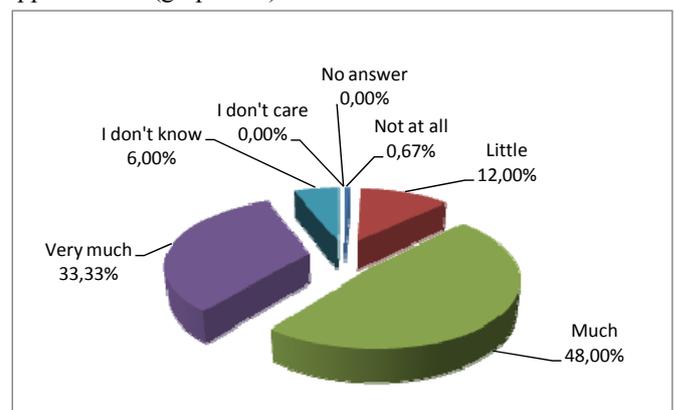


Fig 1. Share of responses on the usefulness of continuing studies, the cycle master II

Being interviewed on the intention to continue their studies through the training of master at the Technical University of Cluj-Napoca, 25.33% of the students have investigated safe yes, the remaining 72.00% expressing some uncertainty in the answers given. Note that there is a reduced share of 2.67%, which says that they are not interested in continuing studies students at UTC-N (graphic 2).

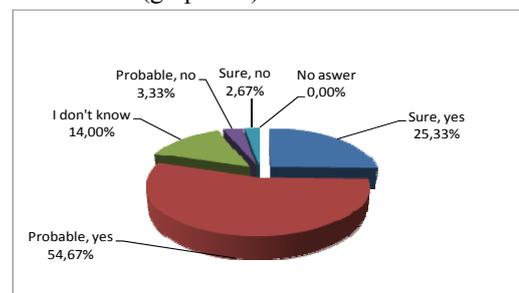


Fig 2. Distribution of responses by type of graduate master agreed in Engineering and Management

Of the total of 150 subjects interviewed, 128 representing 85.33% were motivated by the intention of continuing education training of the master, at the Technical University of Cluj-Napoca, the remaining 14.67% have no response. (table I).

TABLE I  
The subjects responses according to respondents expressing motivation on the intention of continuing education through training of the master, at the Technical University of Cluj-Napoca.

	Total	Expressing motivation	No answer
Total	150	128	22
	100%	85,33%	14,67%

Analysis of incentives provided by those who argue strongly that they wish to continue studies in the master of UTC-N, reveals the rank I wish to remain students cycle II in the same University (18 students), followed by the idea that they have increased opportunities taking a job, because the quality of knowledge gained in the University (8 students), the prestige of the University is a strong motivation for 8 students and mandatory continuing studies according to the Bologna (4 students), the prestige of teachers and professional satisfaction were more important reasons which helps in making decisions on further studies.

Among those who have expressed uncertainty response (probably yes), reasons may include the uncertainty in choice of specialization, organization offering education students and 'satellites' UTC-N (Bistrita and Alba-Iulia), which is explained by high costs due to accommodation and maintenance during his master's degree and need the same commitment to educational activities.

Responding to the question 'Which of the following training of master you want to continue your studies in the Technical University of Cluj-Napoca?' Students interviewed were chosen in different weights, proposed specializations: Engineering and Management Enterprise sustainable for which 16 persons were chosen, Technology Entrepreneurship-16 responses, Management Engineering Business was selected by 66 of the answerer, Property Assessments considered attractive by 21 of those polled, Logistics being chosen by 22 subjects (graphic 3).

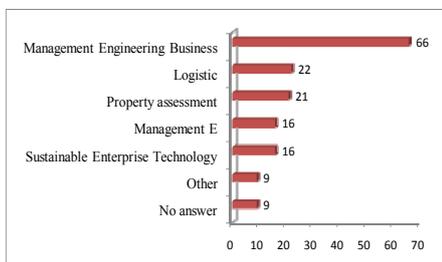


Fig 3. Distribution of responses regarding the types of master opting for subjects interviewed for.

Other specialization proposed by students were: Quality Management (3 subjects), Human Resources Management (2 subject) and in Design Industrial Production (1 topic), weld Engineering (1 subject) and Technology of Machinery (1 subject).

In current conditions, funding education is an option of individual, family and state, at the same time. Students interviewed said they were willing to follow certain courses of the master's degree in UTCN if they are offered as places financed from the budget, the shared of 50.00%, the main reasons being: free schooling (39 of respondents), the desire of continuing studies (9 students), usefulness for future personal (9 students). Those who responded 'probably yes', representing 40.67% of the answerer stated as reasons for the choice made, the desire for employment, in order to sustain themselves in terms of financial (5 answerer), completing studies in areas useful future job, and hope to bring a greater chance of success in filling a job (8 students).

Uncertainty (5.34%) to continue studies at the end of the faculty, even in the financing of the budget is supported by allegations that the field believes that answerer master's degree would be suitable for the workplace (7 students). They believe that the option for a domain master at this time is premature (graphic 4).

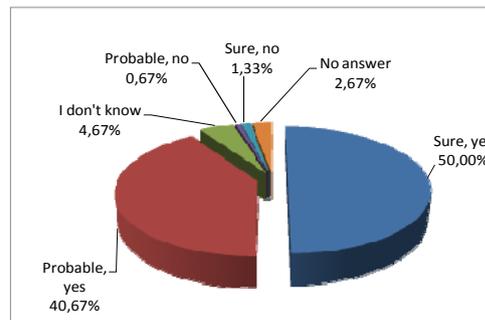


Fig 4. Share the responses of subjects interviewed in the light of accepting the offer of continuing education cycle II on state-funded

Offers for further studies under the fee is not really an option agreed by participants in the study subjects. The percentage of respondents to this question with 'probably not', 'sure no', 'I don't know', is 71.33% of the answerer, just under one quarter of the students interviewed (24.66%) would choose, or perhaps safe for students to continue their studies in the form of higher fees, which suggests many things: lack of financial maintenance on this age, low income family or a desire financial independence of young people, etc (graphic 5).

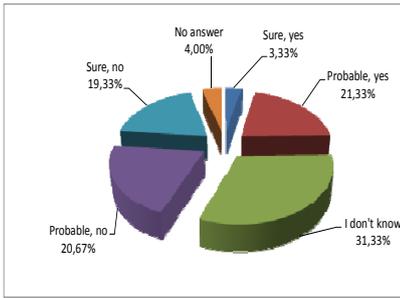


Fig 5. Share of responses depending on the acceptance of the offer for further studies on the place of duty.

Being questioned on subjects deemed necessary in the education of Master of Engineering Management and sustainable businesses, the majority of responses (91 options) indicates the need for discipline: Implementation strategy for sustainability: methods and tools, followed by 'The game simulation business' (53 responses), 'Strategy and corporate-social responsibility' (50 responses), (graphic 6).

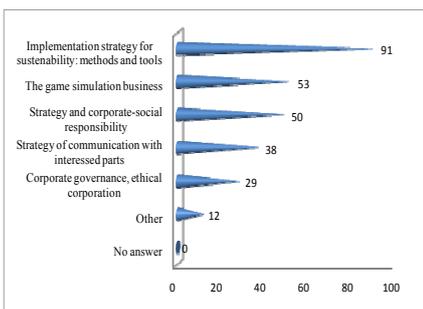


Fig 6. Distribution of responses on subjects deemed necessary in the education of Master of Engineering Management and sustainable business.

Most responses indicated 'Technological Entrepreneurship' (104 options), 'Business Seminar', 'Entrepreneurship applied' (63 options), followed by Strategic Management, Management and cost calculation, the number nearest sensitive, as deemed necessary discipline 'The curriculum of Master of Technology Entrepreneurship'.

'Management and Business Engineering', as the title of master, gathered nearly two thirds of responses, subjects agreed to as necessary, the situation is as follows: first place, 'Project Management' followed by 'Strategic Management' (81 responses) and 'Financial Management' (77 responses).

Disciplines required for the Master of property assessment indicated the most frequent subjects interviewed were 'Fundamentals evaluation' (96 responses), 'Evaluation of enterprise' (94 responses), 'Diagnostic assessment' and 'Evaluation residential property' of 84, and 82 responses (graphic 7).

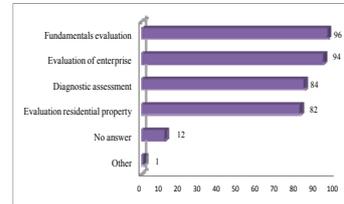


Fig 7. Distribution of responses on subjects deemed necessary in the teaching of the Master 'Property assessment'.

Most of the responses given by subjects shows answerer option for 'Logistics Bases' (104 responses), 'Supply chain Management' (99 responses), 'Supply Management' (75 responses), as a major development plan for the education of Master's degree of 'Logistics'. Structuring teaching activities in the master degree is considered an important aspect for a more adequate supply of services to facilitate access students to them. The majority of respondents (112 answerer) chose option. After 16 hour, motivating desire and decision (hope) to engage as soon as possible after completion of the faculty or employee status you have now (graphic 8).

The structuring of the teaching activities of the morning was motivated by intellectual maximum yield in this period of the day (21 responses), other proposals were divided organization, modular (8 responses) and the program established by negotiation between teachers and master (1 answer).

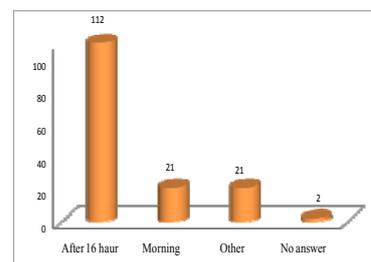


Fig 8. Distribution of responses on planning the master's degree in teaching.

Of the total respondents only one third (33.67%) had suggestions on the organization and deployment of forms of preparation of the Master UTCN.

Suggestions concerning the organization and conduct of such training, a Master in UTCN, included: interactive courses, updated regularly as the theme, using modern teaching methods, interactivity, focusing on practical problems and applications integration, objective assessment, programs flexible Work activities during teaching and exam, need recognition as a master's degree experience in the field organization to end weekends.

Questions identifying the students present investigation.

In group examined the share of female subjects was 45.33%, and there are not answers to this question (3.33%).

Answerer Most students had averages between 7 and 8 (50.67%), (graphic 9).

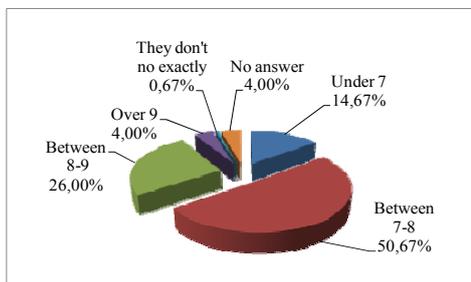


Fig 9. Share subjects surveyed according to the average of the years of study.

### III. CONCLUSIONS

1. Most students (81.33%) believes that education of the master is very helpful and useful career.

2. Over 80% of participants in the study plans with high probability or safety, to continue studies in a master training at the Technical University of Cluj-Napoca.

3. Over 85% of the answerer and have reasoned choice, which may suggest, perhaps, maturity and independence in decision making.

4. Most responses (66) showed that option Master in 'Management and Engineering for Business', followed in descending order of 'Logistics' , 'Property Evaluation' , 'Technological Entrepreneurship' and 'Engineering Management Enterprise and sustainable'.

5. Half of the students interviewed said that they want, sure, to follow courses in supply of the master UTCN, whether they will be offered places financed from the budget, the main reasons being: free schooling, the desire of continuing studies, the utility for future staff.

6. Those who responded 'probably yes', representing 40.67%% of answerer said the cause of indeciziei their desire

for employment, in order to sustain themselves in financial terms.

7. Uncertainty (5.34%) to continue studies at the end of the faculty, even in the financing of the budget is supported by allegations that answerers Master considers that the area would be suitable for the workplace. They believes that the option for a domain master at this time is premature.

8. Only one quarter of students polled would probably eighth or safe for students to continue their studies in the form of higher fees, which suggests the lack of financial support to the elderly and low income family or a desire financial independence of young people. However, several have provided data for any tax that would be willing to pay for courses to Master.

9. Structuring teaching activities is considered important to facilitate access by students. The majority of respondents (112 answerer) were chosen variant of organizing educational activities 'after 16', motivating the desire and decision (hope) to engage as soon as possible after completion of the faculty, or employee status, which it has now. Other proposals were: modular organization and program established by negotiation between teachers and Master.

10. Suggestions concerning the organization and conduct of such training, a Master in UTCN, included: interactive courses, updated regularly as the theme, using modern teaching methods, focusing on practical problems and applications integration, objective assessment, programs, flexible work during the teaching activities and examinations, recognition of the need Master the expertise and organization of activities at weekends.

11. Study confirms the idea that this type of consultation needs periodic training provides feedback is systematically, allowing documentation, launching and updating, offers educational opportunities and appropriate large and successful implementation.

### IV. REFERENCES

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