

Full Length Research Paper

The influence of the recession on major selection for undergraduate study programme

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The paper addresses the important question of how potential students absorb and store data in order to make logical and rational decisions when choosing an undergraduate program and major, and what motivates them. Quantitative research using a survey was conducted for analyzing undergraduate program selection among students who completed high school education. Based on the research findings, a qualitative study using a clinical focus group was conducted to analyze the motives that drive business program students in their major selection. Six factors were identified as potential motives: clearly defined life goals, level of student's curiosity, aspiration, creativity, achievement and socialization. During a period of economic downturn, it is difficult to predict which professions will be popular. Business students are driven primarily by rational motives in undergraduate program decision making, while they are led by emotions in choosing marketing major. In order to obtain a clearer insight into the results, it is necessary to conduct research on a larger sample, which will also purify the research instrument. The paper has great practical implications for university managers and curricula creators.

Key words: Education, consumer behaviour, motivation, career selection.

INTRODUCTION

During a period of economic downturn, it is even more difficult to predict which professions will be popular. There is a lack of significant scientific research findings on students' behaviour in post-recession periods, when many things are changed (Zumeta, 2010). Over the past decade, the authors of this paper concluded that internationalization has been incorporated into the mission statements of most universities worldwide (Husic-Mehmedovic et al., 2011), but the economic recession forced universities to invent more cost-conscious ways to achieve their goals of globalizing teaching, learning and research (Fischer, 2010). The crisis deepened the gap between the viewpoint that international education is or is

not the sine-qua-non of contemporary employment policy (Alam, 2009).

It is obvious that the recession affected all areas of modern business. Business customers, partners, and companies demand advanced degree programs that will educate their employees and help them in meeting requirements with fewer resources (Alam, 2009). These constraints are forcing higher education institutions to modify their programs from theoretical and strictly academic emphasises to practice-oriented programs offering skills adapted for business environment.

Many authors define a recession as two or more consecutive quarters of reduced gross domestic product (GDP). An economy during a recession experiences a period of negative growth in which real income declines, unemployment rises, and industrial production is unsteady (Alam et al., 2011). A prolonged period of recession moves the economy into an economic depression (Smullen and Hand, 2005).

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Abbreviations: BH, Bosnia and Herzegovina.

Little in particular is known about how potential students find, absorb and store data in order to make logical and rational decisions on their choice of university/college (Moogan et al., 1999) and what their motives are. Given the time spent, and the complexity and variety of choices involved, one would classify such decision-making as extensive problem solving (Kotler, 1997).

MOTIVATION AND DECISION MAKING IN HIGHER EDUCATION

Students' motivations

Motivation is among the most powerful determinants of a student's success or failure during the educational process (Hidi and Harackiewicz, 2000; Reeve, 1996; Ryan and Connell, 1989; Hardre et al., 2007). As people are active beings, psychologists and economists have always been interested in issues related to the causes of human activities, the types of these causes, and their systematization, classification and hierarchy. A special issue is the importance of motivation in vocational orientation, the selection of education and occupation, achievement at work, the effects of specific activities, and success in careers, etc. (Ashford et al., 1989; Bynner, 1997; Cameron et al., 1999; DeMuse et al., 1994; Feldman, 2003; Heckscher, 1995; Marshall and Bonner, 2003). The fundamental basis for the aforementioned activities is motivation represented by different motives, needs and incentives, habits, feelings, psychological attitudes, moral consciousness, among others.

According to Rot (1968), motives are internal factors that trigger the activity directed and managed towards the accomplishment of certain goals. Motivation is the result of complex dynamics that include both individual (dispositional) and situational (contextual) variables (Bandura, 1997; Pintrich and Schunk, 1996; Hardere et al., 2007). There is no complete and generally acceptable classification of motives, and most commonly motives are recognized as rational and emotional, while two types of motivation can be distinguished: positive and negative (Cicic et al., 2009). According to Rowley (1996), people are primarily self-motivated and self-controlled, while according to Maslow's (1970) theory of needs, motives can be viewed from two different respects: an essential priority in meeting physical sustainability and a priority in meeting the needs of personal development.

Besides the motivation for learning, all students have different primary and secondary motives and place different degrees of significance on social motives or needs. Within this research, secondary school students are viewed as potential users of higher education services, because it is proven that the vast majority of them want to continue their education at an institution of higher education, regardless of whether it is domestic or abroad. This is especially true for those students who have clearly

set goals and motivations in high school: the motive of curiosity, and a high level of aspiration and motivation for achievement.

Career selection

Regarding choices on occupation and career, there are several theories that present different groups of characteristics that are responsible for the selection of a given occupation. Choosing to continue with higher education or choosing to work immediately after high school is one step in this process. Therefore, the motives and reasons for career selection are an important basis for the motives and reasons behind the selection of an undergraduate program or major.

Shafer's "theory of need" (2000) reckons the degree to which a business can satisfy most of its needs and motives, perceived as the main determinant of choice of profession. The following needs are stated as the most important: the need for expertise, the need for creativity and the need to realize social benefits. Bordin (1984) emphasized that professional interests and aspirations are products of personality, and that they change under the influence of two factors: acceptance of the stereotypical images of an occupation, and the image that people have of their personality. Super's "Life-Span/ Life-Space Theory" (1980) believed that humans are anything but static and that personal change is continuous. Some of Super's main tenets are: every individual has potential; people have skills and talents that they develop through different life roles and that make them capable of a variety of tasks and numerous occupations; in making a vocational choice, an individual is expressing his or her understanding of self, his or her self-concept; people seek career satisfaction through work roles in which they can express themselves and implement and develop their self-concepts. Self-knowledge is the key to career choice and job satisfaction. According to McGregor (1960), there are generally lazy people (those who are motivated just by external stimulants, and who are not capable of self-control or discipline) and more valuable people (those who trigger internal motives that are capable of self-control and are less influenced by their own emotions).

These theories outline several career selection determinants that can generally be divided into two streams: satisfaction of needs or external stimulants, and personality, self-concept and self-knowledge, or internal stimulants. Motives for career selection can be extrinsic, including earning prospects (Oosterbeek et al., 1992) and pressures from parents, teachers and peers. They can also be intrinsic, and derived from cognitive interests, personality factors, performance, etc. (Fazey and Fazey, 2001). Houle (1961) proposed the existence of three "motivational orientations" within individuals wanting to participate in higher education: "goals", "activity" and "learning." These emphasize the economic incentives to

obtain a degree.

Therefore, it can be seen that the determinants and motives of career selection are under the influence of the environment and external factors as well as under the influence of internal factors and personality. The crisis and economic downturn are environmental factors and represent external influence.

They also indicate an economic, rational perspective based on a concern with value and earnings.

The higher education market

As the recent financial crisis in the US resulted in a global economic recession, the consequences are evident even now, as many countries worldwide are still in a deep economic downturn. It has influenced all aspects of the economy and life, and it is an important factor to consider when it comes to the choice of an undergraduate program and future career.

The higher the level of unemployment at any given moment in time and the greater the anticipated wage premium following graduation, the larger the probability of enrolment in a certain study program (Bennett, 2004). The global economic recession, in combination with an expansion in higher education, has resulted in an excessive number of college graduates, which has led to a high graduate unemployment rate (Wu, 2010). Recent higher education graduates from both developed and developing countries have experienced a great deal of difficulty in finding jobs (Li and Morgan, 2009 in Wu, 2010).

All companies worldwide started downsizing their human resources.

The importance of this effect and its impacts are well documented (Ashford et al., 1989; Cameron Freeman, and Mishra, 1999; DeMuse et al., 1994; Heckscher, 1995; Marshall and Bonner, 2003). It is a complex phenomenon with many contributing factors and related contingencies.

The incidence of corporate downsizing as a core business strategy has become increasingly common in developed countries. Even organizations with long-term traditions of job security have not been immune.

Cranmer (2006) states that, UK government has supported university programs that help development of work-related competencies, all that, as the response to market demands, confirms the need to add more practical knowledge and employable skills to school syllabuses.

Previous research suggests that lowering the gap between offer provided by higher education institutions and the skills demanded by industries is the key to solving this problem (Walker, 2007; Wu, 2010). Zha (2009) has revealed that a growing number of higher education institutions are developing fiscally promising programs and majors, such as finance and banking, in order to attract prospective students.

As this research is conducted while the recession

effects are still present in most parts of the world, it will follow that the theoretical presumptions and models reflect changed circumstances.

RESEARCH METHODOLOGY

The research was conducted in Bosnia and Herzegovina (BH); therefore, a short introduction will be given on the current situation in the country. According to the BH law on secondary schools (Official Herald of SRBiH No.39/90 and the Official Gazette of RBiH, No. 3/93, 24/93, 13/94 and 33/9), secondary schools are defined as: gymnasiums, technical and related schools, vocational schools, art schools, religious schools and schools with special needs. In the academic year of 2008/2009, there were 302 secondary schools in both entities (entities are geographical and administrative divisions, each roughly represents one half of the state's territory) of the BH, 209 in the Federation of Bosnia and Herzegovina and 93 in the Republika Srpska.

With an estimated population of 4.3 million, BH has 8 public universities (Sarajevo, Sarajevo-East, Tuzla, Zenica, Banja Luka, Bihać, Mostar-East, Mostar-West). In addition, during the last ten years, many private universities/schools have been established. With regard to degree-based education in the fields of economics and management, according to the Federal Ministry of Education and Science, there are currently 32 higher education institutions (HEI) in Bosnia and Herzegovina.

In order to identify and analyze the level of individual motivational factors and needs of high school seniors, a quantitative research entitled Undergraduate Program Selection, was conducted with students who completed secondary education. The research assessed the motivation and needs of students, from randomly selected high school seniors, for their undergraduate program selection. For research in Undergraduate Program Selection, hypotheses were defined, as follows:

H₁: Defined life goals positively influence undergraduate program selection.

H₂: The level of achievement directly affects undergraduate program selection.

H₃: Level of socialization directly affects undergraduate program selection.

This research was based on the importance of five different characteristics of potential students when choosing an undergraduate program. The characteristics that were observed were: life goals, curiosity level, aspiration level, achievement, creativity and level of socialization. These represent the independent variables of the research. The dependent variable was the issue of undergraduate program/career selection.

The survey was developed in the form of a questionnaire with a five-point Likert scale for measuring attitudes. The first 5 affirmative statements were taken from a scale of life goals and the remaining 25 from Torrance's tests. In his recommendation, Torrance (1966, 1974) suggested the following uses for the tests: to understand the human mind and its functioning and development; to discover effective bases for individualizing instruction; to provide clues for remedial and psychotherapeutic programs; and to evaluate the effects of educational programs, materials, curricula, and teaching procedures. The questionnaire has its psychometric properties: validity (it measures what it is supposed to measure), reliability, (getting the same or nearly the same results in repeated measurements), convenience, cost-effective implementation, as well as objectivity and the discriminative value of its results. Research was conducted on a random sample of 118 high school seniors.

Analysis of motives and attitudes is possible only with qualitative research, which was conducted in the second part of research,

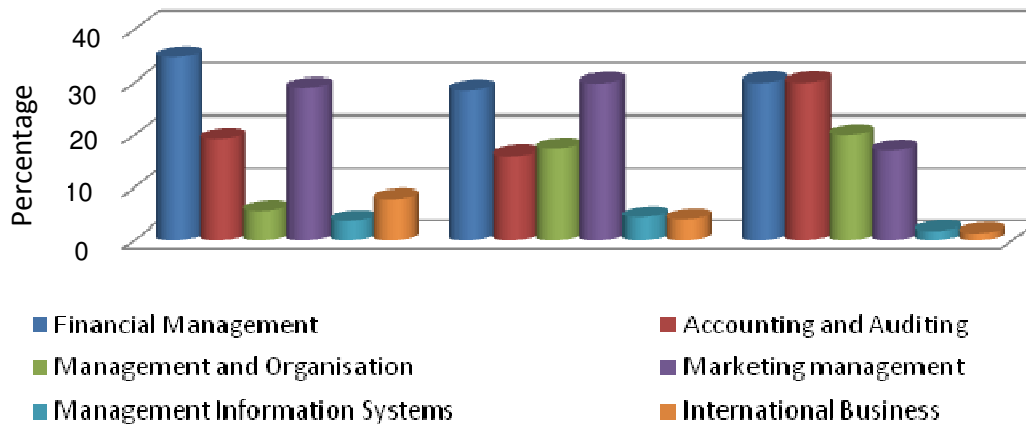


Figure 1. Majors selected by students of the Management Program.

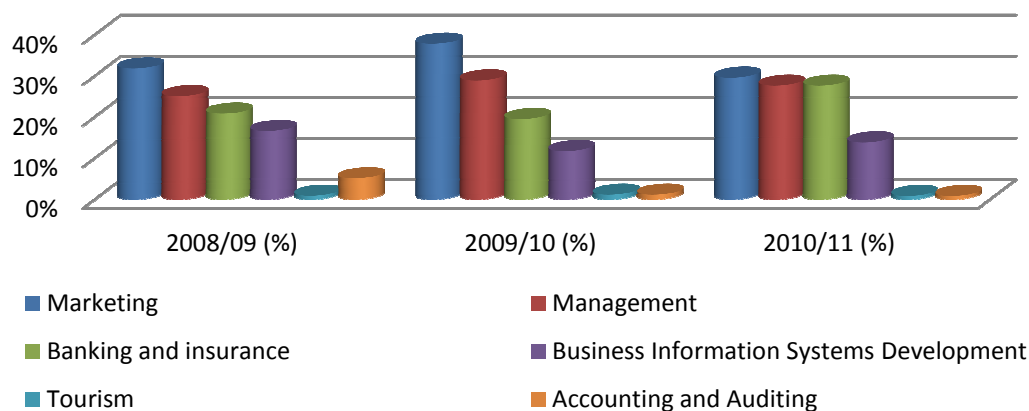


Figure 2. Majors selected by students of the applied business program.

entitled Business Students Major Selection. The qualitative approach was based on three basic positions: the tradition of symbolic interactionism is concerned with studying the making of subjective and individual meaning; ethno methodology is concerned with routines of everyday life and their productions, while structuralist or psychoanalytic positions start from the process of the psychological and social unconscious (Flick, 2009). Clinical focus groups were assembled with students who had completed their 2nd year of business studies. Flick (2009) sees focus groups as a highly efficient qualitative data collection technique that provides some quality controls on data collection. It is low-cost and at the same time rich in data. Three additional hypotheses were defined with regard to the Business Students Major Selection part of this research:

H₄: Rationally driven students select business undergraduate programs.

H₅: Business program students chose the Marketing major driven by emotional motives.

H₆: Business program students chose Finance, Banking and Accounting majors driven by rational motives.

After examining the number of students enrolled in certain majors offered at the School of Economics and Business in Sarajevo

(Figures 1 and 2), changes that have occurred over the period of economic recession become evident.

The qualitative study aimed to detect motivations and perceptions of business students regarding major selection, specifically whether, and to what extent, the economic recession determined their major selection, and what reference groups influenced them. In this case, the same student characteristics were examined: life goals, curiosity level, aspiration level, achievement, creativity and level of socialization, as well as the emotional and rational motivations that foster students to choose their majors. The participants included 20 students (10 males and 10 females in two focus groups) aged between 18 and 24 years. Participants were homogeneous regarding their major selection. The focus groups were held during October 2010, with a professional moderator.

RESULTS

Undergraduate program selection

Research variables were computed using an arithmetical mean. The positive or negative sign of certain questions was taken into consideration because all of the variables

Table 1. Correlation results.

Variable	LG	CUR	ASP	ACH	CRE	SOC	UPS
Life Goals (LG)	1						
Level of Curiosity (CUR)	0.231*	1					
Level of Aspiration (ASP)	-0.081	-0.199*	1				
Level of Achievement (ACH)	0.378**	0.352**	-0.066	1			
Level of Creativity (CRE)	0.050	0.275**	-0.029	0.239*	1		
Level of Socialization (SOC)	0.393**	0.310**	-0.140	0.449**	0.267**	1	
Undergraduate Program Selection (UPS)	0.422**	0.321**	-0.165	0.616**	0.301**	0.551**	1

*Correlation is significant at the 0.05 level; **Correlation is significant at the 0.01 level; N = 118.

Table 2. Cumulative results for chosen factor.

Factor	N	Mean	Deviation
Life Goals (LG)	118	3.8237	0.58011
Level of Socialization (SOC)	118	3.7767	0.70334
Level of Achievement (ACH)	118	3.6263	0.66810
Level of Creativity (CRE)	118	3.4626	0.67261
Creativity Level (CRE)	118	3.3527	0.61529
Level of Aspiration (ASP)	118	3.2356	0.63657

were within the same range and all of the questions had the same relative importance. Correlation showed that all independent variables, with the exception of aspiration, significantly (at the 0.01 level) correlate with the dependent variable (Table 1). Also, it can be concluded that level of achievement has the greatest influence on program selection, followed by socialization and life goals. It can also be concluded that the independent variables are inter-correlated, and that creativity and aspiration influence achievement, which is highly connected to life goals.

Regarding descriptive standard statistical measures, the average arithmetic mean of the affirmative statements was 3.61 (with a range from 2.47 to 4.33), and a standard deviation of 1.064 (with a range of 0.842 to 2) indicates a very good motivation for study at any higher education institution. The data are homogeneous, a little scattered around the aforementioned arithmetic averages. Cumulative results are given in Table 2.

The aforementioned data indicate very low dispersion and relatively high homogeneity, giving primacy to life goals, socialization and achievement. These results indicate that most respondents have clearly stated objectives and thoroughly manage to reach their goals. If it is known that the perceived motives and needs lead them to the achievement of certain goals, then it can be concluded that the vast majority of high school students have distinct needs and projected targets for their careers/studies. The students tested presented a great level of curiosity, which was adequately showed by a quite high arithmetic mean and small standard deviations in their

affirmative statements. As for the areas of science that are of most popular interest, the social sciences top the list, followed by the humanities and medical sciences (Table 3). Art attracted the lowest level of interest.

Based on the aforementioned results, it can be concluded that life goals are of influence when students are choosing an undergraduate program that is a confirmation of H₁. Regarding achievement motives, students actually strongly refer to their previous achievements when choosing their undergraduate program. This can be explained in the way students always compare the fields they are good at with the potential fields they see themselves in during their future careers. Therefore, H₂ is confirmed. As for H₃, social influences are evident motivators for studying because students follow groups, and those close social groups are sometimes crucial for program selection.

Business students' major selection

Focus group participants claimed that when choosing an undergraduate business program they were motivated mainly by rational motives (life goals, achievement) and thus stated that business programs offer a wide range of working positions, networking and practical skills that are useful for future work (confirms H₄). In the process of undergraduate program selection, an important addition to the perceived quality of service is a mix of tradition, history and the quality of faculty members. Prestigious international accreditations are of least importance.

Table 3. Chosen undergraduate programs - areas of science.

Area of science	No.	Percent	Valid (%)	Cumulative (%)
Social sciences	48	40.7	42.9	42.9
Humanities	25	21.2	22.3	65.2
Medical sciences	6	5.1	5.4	70.5
Mathematical sciences	8	6.8	7.1	77.7
Technical sciences	21	17.8	18.8	96.4
Art	4	3.4	3.6	100.0
Sub-total	112	94.9	100.0	
Do not know	6	5.1		
Total	118	100.0		

Students are aware that sometimes, other institutions provide better quality education, but decisions are made based on determining the best ratio of costs to benefits.

Students that took part in focus groups believed that the Marketing (MARK) major offers more opportunities than others, especially for creative young people. The MARK major is perceived as not only creative, but one that teaches the decision-making process in terms of the possibility of performing operational tasks for certain procedures. Personal affinities and interests were the most important predictors in decision-making. A large number of students enrolled in the Marketing major have previous work experience. When choosing the major, friends and parents have the greatest impact. Students perceive that Management (MGMT) and Marketing majors as similar, and the biggest dilemma is deciding between these two directions.

Students believed that the major in Financial Management (FM) offers higher vocational training, but that Marketing is fun and creative. Focus group participants believe that the best students choose FM and Accounting (ACC). Students consider it easier for FM graduates to find jobs. However, the experiences of previous generations suggest that employment does not depend on one's major. Major Management information systems (MIS) is considered to be insufficiently developed.

Students stressed that in order to deliver sector specific, business oriented skills; universities should easily embed the curriculum of undergraduate programs through "add-ons" to a classic degree program. Higher education institutions must diversify their curricula and provide graduates with knowledge and skills that meet market demands in order to help lower the graduate unemployment rate (Wu, 2010).

Based on the focus group findings, it can be concluded that business students choose a major in Marketing driven by emotional motives, which confirms H₅. Due to the economic crisis, the number of students choosing the Marketing major is lower, because the economic crisis has made students choose their majors on the basis of rational motives. Due to the effects of the recession, business students choose majors with more practically

oriented curricula (confirms H₆).

Conclusion

One of the hardest hit groups in the economic downturns is the student population, who are faced with the difficult choice of undergraduate program while choosing between sometimes inadequate program offerings. This paper has proven Shafer's "theory of needs," which highlights the need for expertise, creativity and achievement of social benefits, followed by all other theories of career/study estimated high grades.

A period of economic decline presents opportunities to examine the efficiencies of operations of the higher education system and to evaluate its contributions to academia and business. Universities should work together with businesses in order to recover from recessions and to ensure that graduates have the right skill-set for now and for the future. Therefore, universities must diversify their curricula to help students with their monetary difficulties by increasing their employability and strengthening their labour market competitiveness. The overall trend is moving toward practically-oriented skills that are demanded by students driven by rational motives, and away from skills that fall largely within the theoretical and philosophical realms.

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