EXPLORATORY RESEARCH ON STUDENTS’ OPINIONS REGARDING
THE FEATURES OF THE EDUCATIONAL PROCESS
IN A KNOWLEDGE-BASED ECONOMY

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Abstract
Knowledge has always been central to social and human life. In the past decades, new forms of knowledge and technologies have emerged constantly in the knowledge-based economy, a new stage of the capitalist economic system. The aims of our paper are to render in brief the theoretical approaches related to the knowledge-based economy and to highlight the results of an exploratory research regarding students’ opinions on the main features of the educational process of a Marketing academic specialization in a knowledge-based economy. A set of two hypotheses was tested during our research by using qualitative and quantitative research methods. The data gathered were processed through the SPSS software. The results of our research, limited by its purpose, the size of the sample and of the questionnaire, show that the vast majority of students attach importance to the educational process in the knowledge-based economy. They appreciate the professionalism of the professors of the faculty and consider that the academic specialization provide them many opportunities to acquire new and useful knowledge in the knowledge society.

Keywords: knowledge-based economy, educational process, higher education in marketing

JEL Classification: A22, D83, I23

Introduction
The past twenty years have witnessed several fundamental socio-economic and political transformations. The post-modern world is swept by a global incessant and rapid change. In the past decades, new forms of knowledge and technologies have emerged constantly in the knowledge-based economy, a new stage of the capitalist economic system.

Knowledge has always been central to social and human life. We live in a knowledge society in the sense that “knowledge and knowledge-based technologies have become immediate forces of production that influence and change all subsystems of society” (Fuchs, 2005, p. 24). In comparison with the old paradigm of the industrial economy, the new paradigm of knowledge economy has been built mainly upon qualitative factors (e.g. education, research and development, entrepreneurial culture).

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Today there is a huge knowledge and information mass production on a global scale. More and more economies around the world are highly dependent on production, distribution and use of knowledge. Since the 1990s, statistics has shown that more than half of the Gross Domestic Product (GDP) in many economies is knowledge-based, especially due to the rapid development of the service sector components, such as higher education, information and communications, banking (Organisation for Economic Cooperation and Development, 1996). In 2000, the European Union undertook, at the Lisbon European Council, a very ambitious strategic goal: to become the most competitive and dynamic knowledge-based economy in the world.

The competitiveness of nations relies upon distinctive assets such as increasing knowledge, skills and creativity that are different from the traditional factors of production (Department for Trade and Industry, 1998). Institutions, higher education and training, technological readiness and innovation are among the 12 pillars of economic competitiveness of The Global Competitiveness Index (GCI), computed by the World Economic Forum. That is why “ideas, institutions, population, and human capital are now at the centre of growth theory” (Jones and Romer, 2009, p. 5).

The increasing demand for a skilled workforce calls for an orientation towards lifelong learning that leads to the development of a global learning industry. Governments have to facilitate the transition to the knowledge-based economy (please be consistent: use either “knowledge based economy” or “knowledge economy” everywhere in the article) by focusing both on knowledge acquisition (e.g. education, learning) and knowledge development policies (e.g. research, innovation) (Burton-James, 1999). Therefore, “we now see economic development as less like the construction business and more like education in the broad and comprehensive sense that covers knowledge, institutions, and culture” (Stiglitz, 1999b, p. 4). Traditional measures of economic development policy have been supplemented by new ones relating to a sustainable knowledge infrastructure. This means that all countries recognize the centrality of knowledge and education, in general, and science and technology, in particular. In the age of global knowledge economy “the next great struggle after the ‘culture wars’ of the 1990s will be the ‘education wars’, a struggle not only over the meaning and value of knowledge both internationally and locally, but also over the public means of knowledge production” (Roberts and Peters, 2008, p. 27).

A successful economic development at national level highly relies upon the various elements of the knowledge infrastructure. One of the most important is education, in general, and tertiary education, in particular. Finland represents a valuable example of a newly industrialized country that succeeded in closing the knowledge gap between itself and the developed countries. The advance of university-industry-government relationships towards increasing integration has been a long-term process in Finland. Since the 1970s the Finnish tertiary education has become a mass higher education system (Valimaa, 2001) and an integrated part of the national system of research and innovation (Nieminen and Kaukonen, 2001).

In spite of its economic backwardness, Romania has also made important steps towards the knowledge-based economy (Zaman, 2008). By the end of 2005, the World Bank approved The Knowledge Economy Project, 2005-2013, a project initiated by the Romanian government in order to accelerate the participation of knowledge-disadvantaged communities in the knowledge-based economy in Romania. Due to the knowledge disparity by geographical regions, the project is deployed in 260 communities with less than 30,000
inhabitants. In fact, “the major drivers for innovation at the regional level are the most developed and prestigious universities centres, i.e. Bucharest, Cluj-Napoca, Timisoara and Iasi” and “the Capital Region (Bucharest-Ilfov) ranks first with respect to all key knowledge economy indicators” (Rogina, 2006, pp. i, 10). According to the GCI 2010-2011 Romania ranks 67 out of 139 countries of the world with a 4.16 overall index (Schwab, 2010), composed by 4.36 for “basic requirements” criterion (e.g. institutions, infrastructure, health and primary education etc.), 4.18 for „efficiency enhancers” criterion (e.g. higher education and training, financial market development etc.) and 3.24 for „innovation and sophistication factors” criterion (e.g. innovation etc.).

A rediscovery of the economic importance of higher education has been fundamental for understanding the knowledge-based economy. The traditional activities of a university are teaching, learning and research. But the marketization of higher education institutions and the commercialization of their research made them develop entrepreneurial activities (e.g. marketing). As entrepreneurship and innovation have become essential for the creative processes within nowadays economy, governments around the world aim to originate a broadly-based entrepreneurial culture. Teaching entrepreneurship in universities is directed towards developing a higher awareness of entrepreneurial skills, orienting students in setting up the knowledge-driven society. In the twenty-first century, educational values in universities have to change in order to prepare people for life as a self-employed, independent person, rather than for life as employed in any organization.

It is obvious that universities have entered “a new phase of great changes moving the accent from knowledge possession to their exploitation, competitive management and quality control at the process level: teaching, research/creation and academic services” (Dinu, 2007, p. 5). In this respect universities play a crucial role within the societal knowledge infrastructure. On one hand, they are important for successful research activities, which lead to a higher productivity. On the other hand, they create and develop the human capital, which affects knowledge accumulation and dissemination. Universities produce not only knowledge, but also experts who can create and control the new technologies. This largely explains the expansion of national income.

Another issue is the existence of an urgent demand for reconcilement of society’s concerns with corporate interests. Positioned in the front line of knowledge-based institutions, universities are called to provide people with new skills and behaviours - such as “a far deeper appreciation of societal needs, a greater understanding of the true bases of company productivity, and the ability to collaborate across profit/non-profit boundaries” (Porter and Kramer, 2011, p. 64) - in order to become the leaders and managers of today and tomorrow. This is why nowadays universities have to become responsible knowledge-driven institutions.

The aims of our paper are to render in brief the theoretical approaches related to the knowledge-based economy and to highlight the results of an exploratory research regarding students’ opinions on the main features of the educational process of a Marketing academic specialization in a knowledge-based economy. To such end, a set of two hypotheses was tested during our research.

The paper is organized as follows. The first part is dealing with the concept of knowledge economy. The research methodology is presented in the second part. The findings of the research are analysed and construed in the third part, which relates to the fundamental question that has driven our study. This is followed by conclusions.
1. The knowledge-based economy: theoretical approaches and features

In the 1770s, A. Smith, the apostle of economic liberalism, showed in his great tract, *An Inquiry into the Nature and Causes of the Wealth of Nations*, that the production factors are labour, land and capital, and that the division of labour represents a totemic source of economic growth. However, Smith also referred to the speculative merchant who contributed to the production of economically useful knowledge: “The speculative merchant exercises no one regular, established, or well known branch of business. He is a corn merchant this year, and a wine merchant the next, and a sugar, tobacco or tea merchant the year after. He enters into every trade when he foresees that it is likely to be more than commonly profitable, and he quits it when he foresees that its profits are likely to return to the level of other trades.” (Smith, 2003, p. 157)

As a promoter of the theory of national economics, F. List stated in the 1840s that protectionism is legitimised as much as it aims at industrial education of a country. He emphasized the role played by institutions in the development of productive forces, through knowledge creation and dissemination.

In the 1910s, F. W. Taylor put labour and knowledge altogether in order to get a higher productivity. In his seminal book, *The Principles of Scientific Management*, he promoted the idea of elimination of all workers having refused to adopt the best work methods.

An enthusiastic advocate of free market, F. Hayek contended in the late 1930s that the empirical element in the economic theory consists in propositions about the knowledge accumulation. In the mid 1940s, he made a stand against the minimization of the importance of knowledge of particular circumstances of time and place.

In the second half of the twentieth century, many theorists stated that the economic development of the advanced nations derive from the creation, exploitation and distribution of a new production factor, meaning knowledge. In the late 1950s, J. Marschak wrote an essay on the economics of information and organization in which he stated that human beings have not only limited knowledge, but particular knowledge. He also mentioned that the information distribution influences the rules based on which individuals make decisions. M. Polanyi made his famous distinction between tacit knowledge, based on learning and experiences, and focal/formalised/ documented knowledge.

The term “knowledge economy” emerged in the early 1960s, when F. Machlup defined knowledge both as anything known by somebody and as a commodity, and claimed, in his breakthrough study, *The Production and Distribution of Knowledge in the United States*, that the knowledge industry inaugurated the Information Age. He identified five types of knowledge (practical knowledge, intellectual knowledge, pastime knowledge, spiritual/religious knowledge and unwanted knowledge) and distinguished five economic domains of knowledge (research and development, education, mass media, information technologies and services). On his turn, R. E. Lane put forth the concept of “knowledgeable society” in which its citizens collect, organize and use their knowledge to illuminate their values and goals.

In the late 1960s, P. Drucker predicted the Information Era in his book *The Age of Discontinuity*. He coined the term “knowledge worker”, meaning a highly trained and intelligent professional or “a white-collar worker whose primary task was interpretation, translation, and problem solving - requiring the use of gray matter rather than muscles” (Edersheim, 2007, p. 160). Later, he argued that world is based on intensive knowledge and that knowledge is the key economic asset.
Starting from the “scientific-technological revolution” so-called paradigm, R Richta announced the appearance of a scientific civilization based on services, education and creative activities. He concluded that science and technology became productive forces of human life.

In the 1970s, A. Touraine and D. Bell were among the creators of the “post-industrial society” term. Touraine asserted that the post-industrial society is a programmed society that changed the ends of production (e.g. culture) and industrialized information, research and education. Consequently, he added that we are moving from a society of tools towards a society of language or networks. Bell launched the idea of emergence of the post-industrial society, a knowledge society based on a service economy in which most of the employees are not involved in the production of tangible goods. It is a society focused on its capacity to increase the processing and generation of information in order to achieve higher performance. In this respect, M. U. Porat showed that the US economy became an information economy because, since the late 1960s, more than half of the American employees were involved in information-related activities. According to him, there are two economic domains: the domain of matter and energy and the information domain. Moreover, the information domain comprises the primary information sector (e.g. knowledge production, information distribution and communication) and the secondary information sector (e.g. government planning and coordination). Porat took into consideration the total value added by these two sectors to the GDP as an indicator of the information economy. This was the starting point for K. Deutsch when he defined the information society as one in which more than 50 % of the GDP is created in the information economy.

On his turn J.-F. Lyotard stressed, in his book *The Postmodern Condition*, the fact that knowledge has become the main factor of production by the end of the twentieth century. In the computerised societies, knowledge is widely produced and consumed as any commodity. In the same line, the futurist A. Toffler pointed out that the central resource of the Third Wave economy is knowledge. In his opinion knowledge is at the core of the actual money economy.

In the 1980s, the visionary C. Handy pioneered a new insight about the value of knowledge and self-determination. He declared that people will use brain skills rather than muscle skills in the next future. Later, Handy asserted that the capitalism of the twenty-first century consists of intellectual property and know-how rather than of physical resources (Handy, 1997).

In the 1990s, N. Stehr made several comments upon the sociological importance of knowledge as the main new factor of production. In his view, the age of labour and property ended and gradually gave way to the knowledge society. Also, the majority of jobs in this type of society are dealing with knowledge and the economy is becoming more and more driven by symbolic inputs.

M. E. Porter demonstrated the importance of knowledge economy as the basis for the competitiveness of a nation in the international arena. In his well-known Diamond Model of National Advantage he argued that the competitive advantage is fuelled by a national environment that allows and sustains the most rapid accumulation of specialized assets and skills and is generated by specialized factors (e.g. skilled labour, infrastructure). Later on, L. C. Thurow augmented Porter’s view: “...knowledge and skills now stand alone as the only source of competitive advantage” (Thurow, 1996, p. 68). By providing a number of
provocative insights into the future of capitalism, he showed that the shift to knowledge-based industries led to global political and economic change and recognized that the world economy is increasingly driven by the so-called “brain-power industries”.

In the mid 1990s, I. Nonaka and H. Takeuchi launched the term of “organizational knowledge”. This type of knowledge is stored into rule systems, practices, artefacts, routines and patterns that are independent from single individuals. On the other hand, J. E. Stiglitz, the former chief economist at the World Bank, claimed, in the late 1990s, that knowledge is a global public good, central to successful development. That is why the World Bank, as an international community institution, has a huge responsibility for the production and dissemination of knowledge meant for the whole world development (Stiglitz, 1999a).

Since the beginning of this century, M. Castells has promoted the idea of informational capitalism and defined informationalism as a distinctive model of development, characterized by information generation, processing and diffusion that have become the main sources of productivity. Based on a dialectic approach of society and technology, he considered that the dominant functions of the information society are organized around networks.

By analysing the transition to a post-industrial society, G. Ritzer identified several characteristics as follows: the predominance of a service based economy (health, education, research, and government services are the most relevant), the increasingly importance of the white-collar workers, the need for more universities and students, the recognition of knowledge as primary source of innovation and the advancement in innovative technologies. P. M. Romer also considered that knowledge and technology are key factors in ensuring economic growth. In his view most of today’s workers are knowledge workers dealing with software discovery and refinement.

Starting with Porat’s research, the Organisation for Economic Cooperation and Development (OECD) has calculated the share of the information sectors in the whole economy since the 1980s. OECD recognized the important role of knowledge in ensuring economic growth and noted that “knowledge-based economies” are “economies which are directly based on the production, distribution and use of knowledge and information” (OECD, 1996, p. 7). According to OECD, there are four types of knowledge: “know-what”, “know-why”, “know-how” and “know-who” (Figure no. 1).

The British Department for Trade and Industry (DTI) characterised the knowledge-based economy as an economy in which the generation and exploitation of knowledge has become to play a predominant role in the creation of wealth (DTI, 1998). On their turn theorists pointed out the main features of the knowledge economy (Peters, 2001; Skyrme, 1997), as follows:

- Information and knowledge are not scarce resources and can be easily shared.
- The effect of location is diminished.
- Laws, barriers and taxes are difficult to apply on solely a national basis.
- Products and services with high embedded knowledge are more valuable.
- Information and/or knowledge can have different value to different people at different times.
- Skills and competencies are key components of value in a knowledge-based organization.
- Investments in human capital are essential.
Higher education institutions, in general, and universities, in particular, play a fundamental role in the creation of human capital and in the production and distribution of knowledge. In this respect the Faculty of Administration and Business (FAB), University of Bucharest constitutes an edifying case study.

Types of knowledge

Know-what refers to knowledge about facts

Know-why refers to scientific knowledge of the principles and laws of nature

Know-how refers to skills or the capability to do something

Know-who involves information about who knows what and who knows how to do that

Figure no. 1: The four types of knowledge

2. Research methodology

There are several studies regarding the academic management, the responsible educational process, the utility level of courses and/or seminars, the quality of teaching, the professionalism of professors or the role of research in the educational process within the Romanian universities (Burcea and Marinescu, 2011; Nistoreanu, Hornoiu and Nistoreanu, 2010; Bratianu, Reinhardt and Almasan, 2010; Bratianu, 2005). From our standpoint, students’ perceptions toward these issues constitute a valuable topic in our country that can contribute to the improvement of the educational process in the economic higher education, congruent with the requirements of the knowledge-based society.

Our research was an exploratory research which allowed us a better definition of the coordinates of the educational process, the elaboration of a set of hypotheses and the identification of new research directions (Catoiu, et al., 2002). The purpose of our research aimed to find out the students’ opinions about the features of the educational process, in a knowledge-based economy, deployed within the Marketing specialization of the FAB, University of Bucharest, features which were established on the basis of a literature review (Sarbu, et al., 2009; Bratianu, 2005). In this respect we betook a sociological survey among the students through which they indicated their degree of agreement or disagreement on the main features of the educational process in a knowledge-based economy: the academic management, the professionalism of professors, the way courses and seminars meet the requirements of the knowledge-based economy, the quality of educational process, the opportunities provided to the students in order to acquire new and useful knowledge in a knowledge-based society and to become responsible citizens. The following two hypotheses were formulated:

- The students appreciate the professionalism of professors in a knowledge-based economy.
- The students consider that the Marketing academic specialization provides them opportunities to acquire new and useful knowledge in a knowledge-based society.
In order to validate/invalidate the research hypotheses a sociological survey based on a questionnaire and three focus-groups (each of them comprising 10 students) were carried out. The total population consisted of 251 students from the Marketing specialization, day courses. 201 students (80 % of total population) were interviewed: 40 men and 161 women. The sample met the case of the proportion of male and female students within the FAA: approximately 20 % men and 80 % women. With the aim of measuring the data obtained the author used a Likert scale (strongly agree, agree, neutral/neither agree nor disagree, disagree, strongly disagree), which is relatively easy to construct and administer (Catoiu, et al., 1999). In order to calculate the score for each sentence of the questionnaire numerical values were assigned to the 5 stairs of the scale: +2, +1, 0, -1, -2.

The interviews were carried on through self-report at the FAB’s headquarter, in a specially arranged place, using a standardized questionnaire, in the period 03.01.0211-21.01.2011. The questionnaire was elaborated by the author and tested on a number of 15 students from the Marketing specialization. During the pre-test period the average duration of an interview was of 8 minutes. The final form of the questionnaire was established after the progress of the pilot study. After their completion the questionnaires were introduced in a database.

3. Data processing and interpretation

The data gathered were statistically processed by using the SPSS software. The results of the research are presented hereinafter:

- **The academic management of FAB is professional.**

More than 60 % of students, both male and female, strongly agree and agree on the professionalism of the academic management of FAB in a knowledge-based economy (Figure no. 2). Male students are more satisfied than female students with the academic management. More than 20 % of the students are neutral and a relatively small proportion of them disagree about this statement. The score obtained by male students is superior to that obtained by female students: 0.82 versus 0.71.

![Figure no. 2: Students’ opinions on the professionalism of the academic management of FAB](image-url)
The research points out the fact that students appreciate the professionalism of the academic management on the terms of the existence of a strategy that mirrors the mission, the vision, the strategic and tactical objectives, the resources and the operational plans at institutional level. They express their desire to be consulted as stakeholders in the process of elaboration and implementation of the institutional strategy.

- The professors of FAB are good professionals in a knowledge-based economy.

More than 80% of students, both male and female, strongly agree and agree on the professionalism of the professors of FAB in a knowledge-based economy (Figure no. 3). Male students are less satisfied than female students with the professionalism of the professors. A small proportion of students are neutral and don’t know/answer. The score obtained by male students is inferior to that obtained by female students: 1.44 versus 1.54.

![Bar Chart](attachment:image.png)

Figure no. 3: Students’ opinions on the professionalism of the professors of FAB

The responders appreciate the work carried out by the majority of the professors of the faculty which gives evidence of a good vocational training. However they recognize the fact that there are also professors which have to improve their teaching methods, insisting especially on their interaction with students.

- The courses and seminars meet the requirements of the knowledge-based economy.

More than 75% of students, both male and female, strongly agree and agree on the way courses and seminars meet the requirements of the knowledge-based economy (Figure no. 4). Male students are more satisfied than female students in this case. Approximately 15% of female students are neutral in comparison with approximately 7% male students. A small proportion of students disagrees and strongly disagrees about this statement. The score obtained by male students is superior to that obtained by female students: 1.15 versus 1.03.
Exploratory Research on Students’ Opinions Regarding the Features of the Educational Process in a Knowledge-Based Economy

The majority of the interviewed students consider that the curriculum mirrors the economic reality. On the other hand, they emphasize the need to permanently update the syllabi of disciplines and to improve the relationship between the faculty and the business environment.

- **The educational process of FAB is highly qualitative.**

More than 80 % of students, both male and female, strongly agree and agree on the high quality of the educational process of FAB in a knowledge-based economy (Figure no. 5). Male students are more satisfied than female students in this case. Approximately 12 % of women students are neutral in comparison with only 5 % male students. A small proportion of students disagrees on this statement and don’t know/answer. The score obtained by male students is inferior to that obtained by female students: 1.10 versus 1.18.
The high quality is recognized by the responders under the conditions in which quality assurance in higher education represents a priority at the institutional level. In this respect, one fifth of the professors became internal auditor in the quality management system ISO 9001.

- The academic specialization provides students opportunities to acquire new and useful knowledge in a knowledge society.

More than 80 % of students, both male and female, strongly agree and agree about the fact that the academic specialization (Marketing) provides them opportunities to acquire new and useful knowledge in the knowledge society (Figure no. 6). Male students are less satisfied than female students in this case. Approximately 12 % of male students are neutral in comparison with approximately only 7 % female students. A small proportion of students disagrees and strongly disagrees on this statement. The score obtained by male students is inferior to that obtained by female students: 1.10 versus 1.28.

![Figure no. 6: Students’ opinions related to the opportunities provided by the academic specialization](image)

The interviewed students point out the importance of acquiring knowledge that would facilitate them the finding of a job in a labour market more and more competitive. In their opinion, this knowledge can be easier acquired by analyzing case studies and solving applications.

- The academic specialization provides students the possibility to become responsible citizens in a knowledge society.

More than 70 % of students, both male and female, strongly agree and agree on the fact that the Marketing academic specialization provides them the possibility to become responsible citizens in a knowledge society (Figure no. 7). Male students are less satisfied than female students in this case. Approximately 22 % of male students are neutral in comparison with approximately only 14 % female students in this case. A small proportion of students
disagrees and don’t know/answer. The score obtained by male students is inferior to that obtained by female students: 1.02 versus 1.27.

A great part of the responders is involved in social responsibility projects in process of the faculty with a vocational school where young people with disabilities are learning and with a parish with more than 3,000 parishioners, poor in majority. They wish the faculty be involved more in the life of community in the future and they propose to be introduced in the curriculum a discipline related to the social responsibility of organizations.

![Figure no. 7: Students’ opinions on the possibility of becoming responsible citizens](image)

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Conclusions

The results of our research show that the students attach importance to the educational process of their faculty in the knowledge-based economy. The research has validated the two initial hypotheses. The vast majority of the interviewed students appreciate the professionalism of professors of the faculty. Also, they consider that the academic specialization provides them opportunities to acquire new and useful knowledge in the knowledge society.

Our exploratory research was designed and carried out on a relatively small scale, as a preliminary stage for the deployment of an ulterior research. The research, limited by its purpose, the size of the sample and of the questionnaire, represents a starting point for a further research within the Marketing specializations/faculties from Romania related to the study of the students’ opinions about the main features of the educational process of their faculty in a knowledge-based economy. Through a better formulation of the problems and the generation of new ideas, the results of this paper might constitute work hypotheses for researching on bigger and more diversified samples of students from different Romanian faculties/universities.
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