MARKET INFORMATION AND ENTREPRENEURSHIP EDUCATION: A CASE OF TRANSITION ECONOMIES

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ABSTRACT

This article investigates the market knowledge competence of students and teachers in entrepreneurship education and their ability to make marketing decisions. The urgency of the research is explained by the fact that market information services in the countries with transition economies are far-reaching, but they have not been fully understood. The importance of such services in making management decisions in entrepreneurship education increases with the growth of globalization and digitalization of the economy. This study uses both a student and teacher surveys to measure students' readiness to interpret and use market information services (MIS) and to assess student competency of market knowledge. There were five experts to assess the level of knowledge of students and teachers in marketing analysis. Additionally, an entrepreneur survey was conducted to study how much they are interested in competent employees possessing the competency of market knowledge. It should be noted that both teachers and students use market information in the educational process. The findings show that students learn about market information through the use of modern teaching methods and when attending modern academic disciplines, developed with due regard to modern data. In this case, their decision was based entirely on market information. The survey shows that 55% of respondents are able to analyze market information, 35% have the general idea, and 10% never used it. Among that, 65% of teachers possess the knowledge of market information at a high level and can teach students to use it for marketing purposes. Moreover, 45% of entrepreneurs are interested in having employees able to make marketing decisions based on market information.

The study recommends paying more attention to current economy development trends and expand the entrepreneurship curriculum with the concept of market information as a decision-making tool.

Keywords: Market Information Services, Transition Economies, Making Management Decisions, Entrepreneurship, Entrepreneurship Education.

INTRODUCTION

Education is one of the most significant and persistent development challenges globally. The role of entrepreneurship education in shaping entrepreneurial attitudes of a person ready to undertake different kinds of challenges in the market economy is all the more important in European countries (Rachwal, 2016). The role of business education services in development of entrepreneurship in the current economy is rather high. Training of small business managers due

to missing particular tool for that kind of staff training and also due to missing governmental standards should flexibly response to the changing needs for training and retraining for the market economy (Firsova & Azarova, 2016). These skills and knowledge in entrepreneurship must provide practical, meaningful knowledge that can be applied in new work environments and that respond to the new demands required by society (Amorós et al., 2016). The main components of distinctive capabilities or competencies are: organizational processes, skills and knowledge accumulation, coordination of activities and assets (Cravens & Piercy, 2013). In the conditions of constant changes in many public institutions, economic and social instability, permanent educational reforms generate and increase the sense of personal insecurity experienced by modern educators. The requirements of the new social and professional situation involve the independent design of their professional path, the presence of high internal motivation for professional achievement. At the same time, against the backdrop of the low social status of the profession as well as the increasing requirements for the level of performance of activities, many teachers and educators are not prepared to rethink own role in the modern educational process and to resolve emerging professional difficulties (Sadovnikova & Zannoni, 2018). It is no longer possible to deny the impact of virtual environment on socialisation and development of the identity of young people. In this regard, the investigation of young people's view on virtual social networks, and the possibility of students' own competitiveness realization through various web services (Semenov, 2018). The university marketing strategies in relation with the institutional higher education strategies such as directing efforts and resources to achieve mission and strategic objectives, facilitating decision making on the marketing mix component (Diaconu & Pandelica, 2011). State spending goes up mostly due to growing pension payments. It is impossible to conclude categorically about a positive effect of fiscal stimulation on economic growth. the growth of state spending due to an increase in fiscal needs has not made it possible to ensure the necessary economic growth rate due to its low efficiency. (Afanasyev & Shash, 2018). The information development of society makes it hard to make decisions based on the large volumes of highly fragmented and changeable information about customers, their mood and preferences, etc. In this case, it is necessary to use aggregation and processing systems of market. The benefits of market information services for transition economies are often underestimated. In the global economy the so-called data brokering companies are quite common. Data brokering companies are the companies that specialize in the sale of collected and processed market information. The report of the USA Federal Trade Commission for 2014 (Data brokers: a call for transparency and accountability, 2014) on the market information services highlights the importance of this information in making all important business decisions. Market information services industry in the USA is characterized by the following: data are collected from various sources; the industry is complex and multilevel; brokers exchange information; the data contain information on almost all transactions conducted in the USA; data collection and processing by companies is not often transparent, data are collected both online and offline. At the same time, as it is shown in (Piryazev, 2005), a domestic entrepreneur, who is aware of the importance of market information, is not ready to pay for market information services. This is often explained by limited paying capacity. There is a number of specific problems in the information services market observed in transition economies: low information, lack of sustainable telecommunication in the regions, incomplete legislative basis, difficulty in assessing the economic effect of information, difficulties in effective implementation of information products, the existence of piracy markets, etc. This fact affects decision making in entrepreneurship education. The problem is made more complicated by the fact that the new

generation of entrepreneurs focuses on the international market and sees the benefits of cooperation with companies providing market information services. These circumstances became the basis for choosing the topic of our research. Our research is relevant from a scientific and practical point of view.

LITERATURE REVIEW

The importance of information completeness when make decisions was justified in one of the first studies devoted to the influence of information services on the decision-making process (Lawrence, 1979).

Entrepreneurship graduates essentially must be competent in marketing decision-making. The relationship of market orientation with distinctive competencies is categorized strong enough. Partial and simultaneous market orientation and distinctive competence have a positive effect on service mix (Sutiksno et al., 2019). There are various methods for students and teachers to assess market information (Bunce et al., 2017). At any stage management decisions can be changed due to the improvement in the quality of information, increase in its volume, including information received from the Internet (Citroen, 2011, Price & Shanks, 2008, Shinnick, 2008). The advantages of information systems for making management decisions are presented in the works by Hasan (2013), Berisha-Namani (2012), Popovič et al. (2012), Turban et al. (2010). At the same time, most of the studies focused on making economic decisions.

In entrepreneurship education, big data are an essential part of learning (Ong, 2016; One Hundred Eleventh Congress of the United States of America). Such data include combined student data (demographic characteristics and academic performance), teacher data (competencies and professional experience), data obtained in the process of teaching, learning and evaluation, both inside and outside the classroom, such as lesson plans, assessment methods, classroom management; human resources, infrastructure and financial plan, including educational and support staff, hardware and software, expenses, as well as student welfare; social and emotional development, such as support, respect for diversity and special needs.

Most researchers believe that the use of big data when making decisions in entrepreneurship education led to an improvement in student performance (Kerr et al., 2006; Lai et al., 2009a; 2009b; Schildkamp et al., 2012; Andronicеanu & Ristea, 2014). This is associated with the improvement of curricula and teaching methods as they were developed on the basis of big data analysis. If we do not use big data in education, we lose time and resources, since the results of intuitive decisions are not correct and the introduction of new practices or curricula do not coincide with the needs of students (Earl & Katz, 2006).

At the same time, the researchers started to pay attention to the importance of information in making decisions in the field of entrepreneurship education not so long ago. Thus, Gelderblom et al. (2016) consider the decision-making process in the secondary decentralized education system. The analysis of the decision-making process is carried out on the results of the regional study based on a representative sample of concerned parties, staff and principles of secondary schools (Panfilova, 2018). In the twenty-point questionnaire the respondents were asked to evaluate their perception of the decision-making process in the institution where they work. The data obtained allow us to describe the decision-making process in entrepreneurship education and analyze the quality of education. The research results show the bottlenecks in the decision making process.

It has been found out that the decisions made on the basis of big data may depend on psychological characteristics of individual teachers in entrepreneurship education (van Geel et

al., 2018; Prenger & Schildkamp, 2018). In some studies, the motivation of teachers is described as the main psychological characteristic (Prenger & Schildkamp, 2018; Mikhaylova & Alifirov, 2017; van Geel et al., 2018).

Based on empirical studies, the process of making decisions by students in university is described (Garrecht et al., 2018). It is shown that big data contributes to the effective implementation of these decisions.

The literature review allowed us to conclude that the problem has not been sufficiently studied in relation to entrepreneurship education in transition economies. This helped us to formulate the purpose of our research. Transition economies are characterized by extremely volatile economic environment, uncertainty and dynamism. In this regard, there is a need to teach students to make management decisions in entrepreneurship education taking into account the dynamic environment. The purpose of our research is to assess the quality of teaching how market information services are used in the decision-making process.

RESEARCH METHODS

Our research is based on a survey method.

To determine the role of market information services in making management decisions, we surveyed 76 people–entrepreneurs and managerial staff of Moscow public institutions (including the educational sphere) and 118 students of the economic faculty of the State University of Management. The respondents were selected randomly. The selection criteria were the following: the respondent is a student of the economic faculty of the university, a Moscow entrepreneur or a principle of an educational institution.

This study involves five experts to assess the skills and knowledge of students about market information. They evaluated at what level (high, medium, low) students can use and analyze market information when making marketing decisions. Experts also assessed teachers–the quality of their teaching, their knowledge of market information and readiness to use this knowledge. Entrepreneurs were involved to determine their interest in employees skilled in the analysis of market information.

Eight per cent of the people refused to take part in the survey. The most common reasons were lack of time and unwillingness to participate in the survey.

Both student and teacher questionnaires consisted of the following questions:

- Your attitude to the purchase of market information provided by data brokering companies (ready to purchase the services, would rather purchase the services, rather not purchase the services, not ready to purchase)
- The reasons for being ready / not ready to purchase market information.
- In what cases did you use market information when making management decisions?

To assess the awareness about methods for market information analysis, students and teachers were asked to analyze the market of Moscow real estate.

The analysis of this task concentrates on scores (from 0 to 5 in each category, where *"0"*–did not cope, and *"5"*–coped with the task). Categories of performance analysis are:

- Subjects analyzed the impact of the overall political and socio-economic situation on the market, including trends that emerged in the market prior to evaluation.
- Subjects classified market segments. If the real estate market is underdeveloped and data does not allow shaping an idea of transaction/offer prices, then the territory of research needs expanding at the expense of territories with similar economic characteristics.

- Subjects analyzed, with an indication of intervals, the actual transaction/offer prices in market segments to which the real estate can be attributed under the real and alternative use scenarios.
- Subjects analyzed the main factors influencing the demand, supply, real estate comps (e.g., rates of return, payback periods), and prices.
- Subjects drew major conclusions regarding the real estate market segments (i.e., market dynamics, demand, supply, sales, market capacity, motivation of buyers and sellers, liquidity, and price fluctuations).

Questions asked to entrepreneurs:

Are you interested in employees, who can make a marketing decision using the market information framework? (Yes, No, Not sure)

At the same time, the information about the respondents included the following data: student/principle of a public institution, scope of activities.

In order to assess the survey results, cross-tabulations were created and the results were filtered. The comparative analysis was used to compare the results of all groups of respondents.

RESEARCH RESULTS

Teacher and student surveys reveal peculiar patterns in managerial decision-making process, which is driven by market research. Survey results in Table 1 demonstrate that most students are engaged in digital economy. They understand the importance of market information in the context of entrepreneurship education and are willing to pay for it. Thus, 74 students (84% of total respondents) are either comfortable with the need to purchase information services or would rather purchase them themselves. By contrast, teachers mostly feel skeptical about the reasonability of market information. Thus, only 3 out of 116 teachers are ready to purchase market information. This proves the knowledge of teachers to be predominantly based on theory, rather than on the spot-on insights.

Table 1 present the summary of survey results.

Table 1
SUMMARY OF SURVEY RESULTS

Scope of activities/attitude towards the purchase of market information	**Student**	**Teacher**
Ready to purchase the services	74	3
Would rather purchase the services	25	7
Would rather not purchase the services	11	9
Not ready to purchase the services	8	22
Total	118	41

Table 2 presents the reasons for why teachers and students are (not) ready to purchase market information. Among them, reasons for the active utilization of market information like the urge to know the market and the reduction (or enhancement) of prices for information services.

Table 2 THE REASONS FOR BEING READY / NOT READY TO PURCHASE MARKET INFORMATION		
The reasons for being ready/not ready to purchase market information/your attitude to purchasing market information	**Student**	**Teacher**
Information is highly reliable	22	5
Market information is highly necessary	14	20
Inability to obtain market information on your own (for example, with the help of Google Analytics, surveys, etc.)	30	35
Other	10	2
Ready to consider the purchase of market information if the price falls down	4	1
Information is questionable	2	1
There is no need in market information	8	2
Ability to obtain market information (for example, with the help of Google Analytics, surveys, etc.)	3	3
Do not accept the activities of information companies		2
Other		
High cost of market information	4	5
Information is questionable	7	8
There is no need in market		7
Ability to obtain market information (for example, with the help of Google Analytics, surveys, etc.)	6	5
Do not accept the activities of information companies	1	2
Other	3	2

Table 3 lists different applications of market information. Among them, market analysis, research for production conversion, change of business activity, career-related decision-making.

Table 3 THE CASES WHEN THE MARKET INFORMATION WAS USED WHILE MAKING MANAGEMENT DECISIONS (FOR ALL THE RESPONDENT GROUPS)	
Stock market analysis	10
Market and customer research for production conversion	18
Market and customer research for expanding the scope of services	11
Change of business activities	20
Career decisions, including the change of university/faculty	28
Decisions on immigration	4

Of all the categories of respondents, the most promising group of respondents is *"students."* It should be noted that both teachers and students use market information. The respondents noted that their choice of the university and the faculty of Economics was driven by the use of modern teaching methods, the availability of modern academic disciplines, developed with due regard to modern data. In this case, their decision was based entirely on market information. In addition, when working on projects, students actively used aggregated data, such as Google Analytics for the projects related to the real economy sector (for example, to analyze demand, customers, orders, and other information for the pizza-making business). These data indicate initiative and individual learning of market information.

On the other hand, the university also made marketing decisions based on market information about applicants, their plans, moods and vision of their future. Security is one of the problems associated with the use of market information in entrepreneurship education. Security is a basic issue that arises in the context of any initiative to use the latest analytical tools. It should be noted that information security requirements are steadily increasing. Privacy is another basic issue. Nobody likes the fact that the available data allow them to identify and track their actions. The data accumulated in education will grow exponentially along with the use of analytics. Entrepreneurship educational institutions are increasingly investing in their IT development in order to ensure their analytical needs and maintain a competitive position in a certain educational sector (Shnyreva, 2014).

Experts thought high of students' performance. Hence, 55% of respondents had a score from 4 to 5 (Figure 1). At the same time, teachers had 10% deeper knowledge of necessary methods (Figure 1), though 54% of them are not ready to use them in teaching.

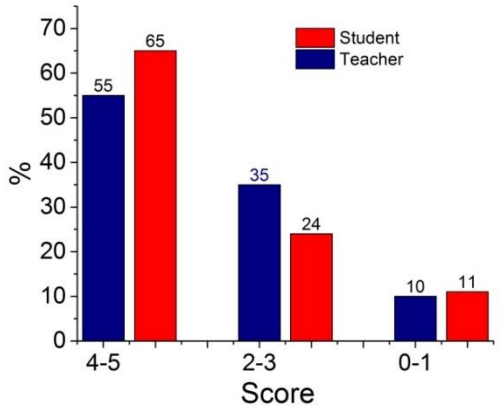

FIGURE 1
EXPERT ASSESSMENT

An entrepreneur survey showed that they are interested in employees, who are highly competent in using market information for decision-making purposes (Figure 2).

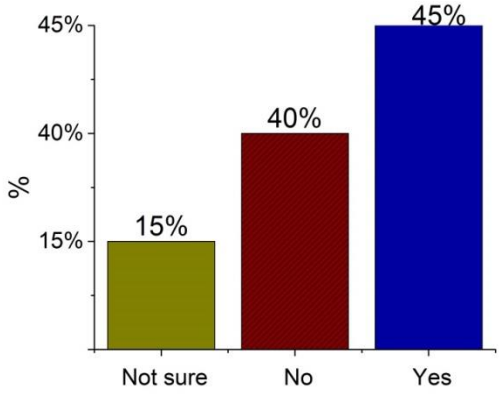

FIGURE 2
ENTREPRENEUR SURVEY

When answering, 40% noted the lack of trust in the knowledge of graduates. This suggests a focus on market information and its analysis when teaching entrepreneurship.

DISCUSSION

This study shows that students are ready and willing to learn ways to analyze and use market information. At the same time, teachers are reluctant to involve this aspect in the learning process. It should be noted that the practice of teaching marketing decision-making based on market information is associated with the status of developing countries. The study (Palk & Muralidhar, 2017) showed that the purchased information is often partially complete. It may be incorrectly interpreted and not correspond to the state of facts. In developed countries, the main problem in the information services market is the protection of the so-called privacy of the people about whom the information is collected (Palk & Muralidhar, 2017). At the same time, these people have a sharply negative attitude towards the activity of data brokering companies. Although, they do not deny the possibility of purchasing such information (Tamò & George, 2014; Alifirov et al., 2018, Chernopyatov et al., 2018).

The *"right to be forgotten"* clearly defined by the legislation system of some developed countries. For transition economies this is a legislative gap. In the United States of America, the *"right to be forgotten"* has not been put into practice due to the First Amendment on freedom of information-no one has the right to remove or hide credible facts. The European approach considers the *"right to be forgotten"* as an inalienable right, which encompasses honor, dignity and the right to privacy. Personal privacy is proclaimed and for Internet users. This means that they can hide their activities from the third parties. The person has the right to make decisions about the possible use of their own data. However, personal privacy in many cases has a conflict with the public interest. High-profile cases related to criminal prosecution and the personal life of public figures are inevitably vulnerable. The users will try to hide such information, despite its social significance. One of the tasks of regulatory agencies is to prevent such incidents (Chikishev, 2017, Afonasova, 2018).

CONCLUSION

This study shows that students initiatively raise their own awareness of benefits that market information provides. Although 10% of teachers have a deeper understanding of the benefit, only 46% in the aware group teach their students ways to make decisions using market research and only 5% of teachers encourage students to apply these methods in practical context. This study points to the need for redefining university education with market information. As it can be seen, information services market is a promising construct to bond with the sphere of education, as future entrepreneurs are ready to purchase these services.

Entrepreneurs are interested in graduates with sufficient knowledge and skills of decision-making. Thus, over 40% of employers are interested in graduates who know the use of market information.

The present generation of students makes the use of market information not only to analyze stock markets but also to decide on the university. Today, universities must teach their students to operate with market information effectively, rather than offer abstract theories.

However, market information may not be complete and may lead to misinterpretation of facts, including those concerning the market situation. Note that all kinds of information services are limited due to confidentiality restrictions.

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