

ROLE OF MARKETING COMMUNICATION IN APPLICANTS' CHOICE OF UNIVERSITY

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Abstract

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The article deals with the issue of identification of the main factors influencing potential study applicants' decision-making when choosing a university, regarding information sources necessary for the decision. The article particularly presents facts describing the contemporary situation in the tertiary education area, its latest development and the demographic development. The measurement itself is based on a primary research in the form of a questionnaire survey at the Gaudeamus trade fair in Brno and at secondary schools in the Czech Republic. The acquired data are evaluated by means of contingency tables and charts. The mutual dependence between examined characteristics is investigated within statistic research by means of chi-square test of independence, chi-square test of goodness of fit and factor analysis using dendrogram.

Keywords: marketing communication, university, decision making, study applicants, marketing research

INTRODUCTION

Growing number of universities causes increasing competition, which is escalated by decreasing demographic curve of students finishing their secondary schools. Nowadays not only private colleges but also public universities have to compete for students.

Czech tertiary education has changed significantly since 1989. Universities have become autonomous and to a large extent independent of the state. Instead of long traditional educational programmes the study has been divided into bachelor and master level followed by (before 1989 non-existent) successive postgraduate doctoral study (Prudký, Pabian and Šima, 2010).

As a result of the new Higher Education Act the structure has undergone fundamental changes, when most former state universities changed their status to public universities (except University of Defence and Police Academy of the Czech Republic). The Act divides the higher education institutions into two types – university institutions, which provide all types of study programmes (bachelor, master and doctoral) and non-university institutions, which provide mostly bachelor

study programmes and do not provide doctoral programmes at all. (MŠMT ČR, 2009b).

The term tertiary education has been used more frequently now next to the term higher education, which is a reaction to the fact that after 1989 non-university institutions and higher vocational schools, many of them private, emerged next to traditional universities (Prudký, Pabian and Šima, 2010). Private colleges and universities started being established soon after the Higher Education Act (No. 111/1998 coll.) came into force. Private schools can act only as legal entities and after approval of the Ministry of Education, Youth and Sports based on Accreditation Commission's approval (MŠMT ČR, 2009b).

Nowadays the interest in higher education is increasing. The bachelor degree is now considered as the same level of education as the secondary school leaving exam ("maturita") before 1989. The society is pushing secondary school students to continue their education at university, as secondary education is considered as non-sufficient.

The period of 1989–2009 is characteristic by transition of university education status from elite via mass to universal. The net entry rate to

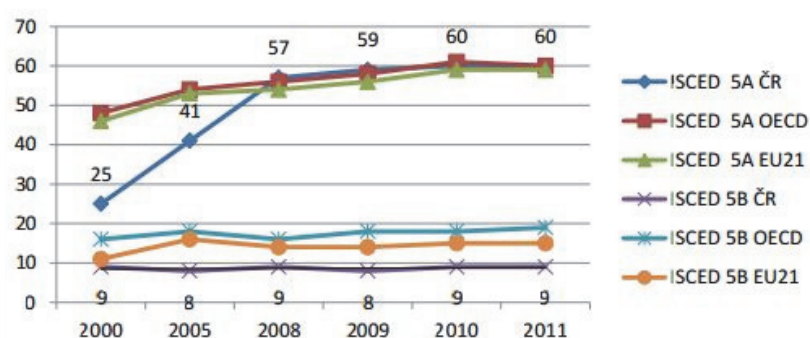
tertiary education (the rate of people entering first the tertiary education in the population) in 2000 was only 25%. However, after 2002 the growing number of students combined with demographically weak years led to higher access to university education (MŠMT ČR, 2009a). From the international perspective the Czech Republic is among the countries where in the last twenty years there was one of the highest increases in the number of newly admitted students to the tertiary education as well as increase of the total number of students. Net entry rate to tertiary education of type 5A was growing steeply until 2008 when the rate of population entering higher education was 57% of population. The sharp increase, as compared to previous years (2000, 2005), was caused by both higher interest in tertiary education by applicants coming directly from secondary schools and by postponed demand (MŠMT ČR, 2014). After adding the number of students entering tertiary education of type 5B the net entry rate to tertiary education is 69% in 2011, which corresponds to the following Tab. I. This trend is presented in the following figure and table (Fig. 1 and Tab. I) from different sources, when in 2008 the net entry rate to tertiary education was more than double, compared to year 2000 and in 2010 it was almost triple the amount.

The access to tertiary, particularly to university education in the Czech Republic is growing. The study opportunities are getting closer to applicants as university faculties or their detached departments are increasingly established in regions interested in this form of education (MŠMT ČR, 2007). According to Tab. I the rate of tertiary education applicants was 69.17% in 2010/11, 90% of

this were university applicants and 10% were higher vocational schools applicants.

A worrying fact from the perspective of the number of potential university applicants is the declining demographic curve of the students finishing their secondary education. This year secondary school graduates were born in 1994/95. In 1994 there was the most significant drop in birth number, by 15000 children and in 1995 the births rates further decreased by 10000 children. This declining trend continued until 2001, when the birth rate started growing again until 2008. The demographic development – see Fig. 2.

From the perspective of effective marketing communication of universities it is necessary to find out which information is important for the potential students and where they search this information most often, so that it is possible to create corresponding communication mix with the right content. For students in Poland the most often used information sources are the Internet (university www, forums, opinions) followed by brochures and handbooks, friend's recommendations, educational fairs, campus visits and rankings (Sojkin, Bartowiak & Skuza, 2012). The research conducted in Great Britain revealed that students search information in university prospectus, university/faculty websites, faculty/school leaflets or they are influenced by recommendation by secondary school teachers and by family members or friends (Moogan, 2011). Czech universities consider as the most important, when addressing prospective students, web presentations of the universities and other forms of advertising on the web (banners), university ratings, somebody else's recommendation and

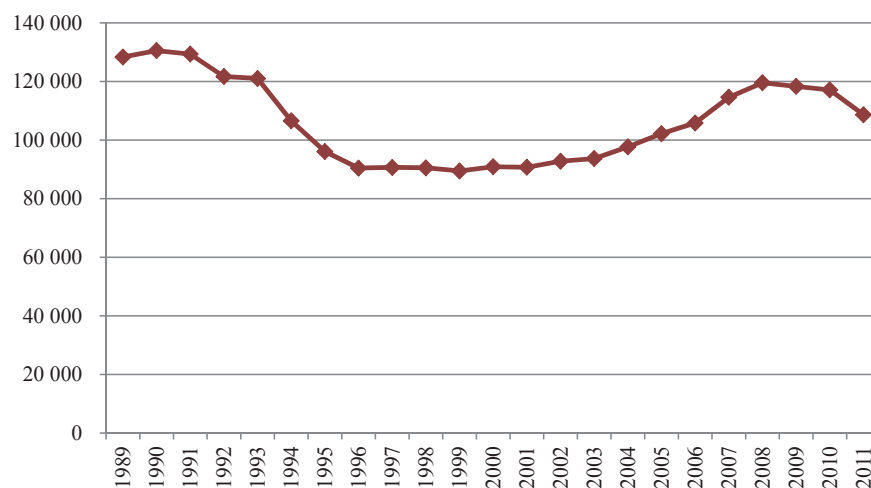


1: Indicators of tertiary education in the Czech Republic (in %)
Source: MŠMT ČR, 2014

I: Net entry rate to tertiary education and its prediction until 2020

| Year | | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|------------------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Nett entry rate (in %) | State universities | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 | 1.54 |
| | Private universities | 9.48 | 9.38 | 9.28 | 9.18 | 9.08 | 8.98 | 8.88 | 8.78 | 8.68 | 8.58 | 8.48 |
| | Higher vocational schools | 7.12 | 7.08 | 7.03 | 6.99 | 6.94 | 6.90 | 6.85 | 6.81 | 6.76 | 6.72 | 6.67 |
| | Public universities | 52.52 | 51.17 | 49.82 | 48.96 | 49.11 | 49.25 | 49.40 | 49.54 | 49.69 | 49.83 | 49.98 |
| | Total | 70.67 | 69.17 | 67.67 | 66.67 | 66.67 | 66.67 | 66.67 | 66.67 | 66.67 | 66.67 | 66.67 |

Source: Koucký and Bartušek, 2011



2: Demographic development in the Czech Republic in 1989–2011
Source: Český statistický úřad

direct contact with students (Schüller & Rašticová, 2011). Many researchers in the area of career decision-making process (including decision-making about universities) analysed the influence of personal factors or respectively the influence of other people (Pappas and Kounenou, 2011) or rather focus on the way of making decisions (Galotti, Ciner, Altenbauer *et al.*, 2006; Germeijs, Luyckx, Notelaers *et al.*, 2012). Quite significant influence of close friends is confirmed in the study by Navrátilová (2013). Among the most important factors at the decision-making process of respondents are the quality of teaching, university reputation, course content and professional advancement. Among the least important ones are the possibility of staying at home or commute daily and cost of studies & accessibility of financial aid (Moogan, 2009; Sojkin, Bartowiak and Skuza, 2012). Lack of information is not the essential barrier in the decision-making process (Navrátilová, 2013).

The situation on the education market escalates the competition among individual universities, which have to compete for potential students and develop new methods of attracting them. Applicants are the second most significant group of stakeholders which then becomes the most important one, namely students (Schüller, Chlebovský, Doubravský and Chalupský, 2014). Universities have to follow new trends in communication, as they are developing fast, and adapt to them to communicate effectively with the potential applicants. It does not mean that they should abandon the standard traditional way of communication but to integrate the new forms into them and create a synergic working communication campaign to persuade the potential applicants.

It is necessary to address the students by creativity. It is important to adapt the communication language to young people and to the potential applicants. A commercial message is considered creative when

it is new, fresh, unexpected and unusual (Světlik, 2009).

Creativity attracts attention and brings competitive advantage. Creative ideas applied at universities' communication and creative solutions used at public relations positively support Word of Mouth marketing (Vining, 2012a).

An excellent opportunity to present the contemporary and future ideas of a university is the institution's anniversary celebration. It has incredible potential as a PR occasion. It is advisable to support the event by photographs and video sequences (Vining 2012b).

The fact that video is a powerful communication tool is also confirmed by Lockart (2005). A video clip accompanied by music can attract and keep attention. The clip should look professional; otherwise the effect can even be contra productive.

Universities have to be as close as possible to potential applicants in communicating with them. Communication via social networks is very popular (most frequently used is Facebook). Marketing communication of universities should focus on using new media – social networks, YouTube, Internet and viral marketing (Čábyová and Ptačin, 2014; Schüller, 2012), in spite of the fact that nowadays the quality level of social networking is often not sufficient (Čábyová and Ptačin, 2014). The interaction between students and potential applicants based on personal meeting is very important as well (Schüller, 2012).

The article focuses on the issue of identification of the main factors influencing potential study applicants' decision-making when choosing a university, regarding information sources necessary for the decision. The results of the performed research should help determine communication channels for universities' marketing communication.

MATERIALS AND METHODS

In this article secondary sources were used to contemporary situation analysis and the data were acquired by the form of primary-source survey.

The marketing research was conducted in the period of November 2012–January 2013 and it was divided into two separate parts designated for different respondents. The main objective of the research was to find out where the respondents search the information on universities and what criteria are they influenced by when applying to a particular school. The first part involved secondary school students who visited education trade fair Gaudeamus in Brno in the period of 29th–30th October 2012 (Target Group 1). The other target group were students from secondary schools where within November and December 2012 and January 2013 interactive accountancy teaching was presented (Target Group 2). The questionnaire survey was conducted in written form. All the respondents were students of the 4th (the final) grade.

At the Gaudeamus fair 163 visitors were addressed. Although the completing and handing in of the questionnaire was supported by a competition with a tablet as the first prize, the interest among students was low. 128 attendants completed the questionnaire. The return rate of the questionnaire was 78.5%. The return rate itself

was considerably high but much higher interest was expected in respect to the total number of respondents.

The survey among the students of secondary schools where the interactive accountancy teaching was presented was conducted in November and December 2012 and January 2013 and 529 students were addressed. 447 of them completed the questionnaire, so the return rate was very high at 84.5%. The structure of the questionnaire was the same for both the groups, so the results of both the parts were summarized and evaluated together.

The total number of addressed potential university applicants was 692, 575 of them completed the questionnaire. The structure of all the respondents is presented in Tab. II. As for the identification characteristics, gender and type of secondary school, were identified. In the survey sample there were 72% female and 28% male respondents. The total structure of the Gaudeamus fair attendants – Target Group 1 (Tab. III) was, according to the Final report (Evropský veletrh pomaturitního a celoživotního vzdělávání, 2012), similar, there were 69% female and 31% male attendants. The structure of the respondents according to their secondary school at the Gaudeamus fair was quite balanced; 35% of the respondents were from business academies, 33% from grammar schools, 33% respondents were

II: Structure of the total research sample: type of secondary school and sex

| | Female | Percent | Male | Percent | Total | Percent |
|-----------------------------|------------|------------|------------|------------|------------|-------------|
| Grammar school | 28 | 5% | 17 | 3% | 45 | 8% |
| Business academy | 236 | 41% | 63 | 11% | 299 | 52% |
| Secondary vocational school | 147 | 26% | 80 | 14% | 227 | 39% |
| Higher vocational school | 4 | 1% | 0 | 0% | 4 | 1% |
| Total | 415 | 72% | 160 | 28% | 575 | 100% |

Source: Own work

III: Structure of the research sample focused on visitor from Education Fair Gaudeamus (Target Group 1): to type of secondary school and sex

| | Female | Percent | Male | Percent | Total | Percent |
|-----------------------------|-----------|------------|-----------|------------|------------|-------------|
| Grammar school | 28 | 22% | 14 | 11% | 42 | 33% |
| Business academy | 37 | 29% | 8 | 6% | 45 | 35% |
| Secondary vocational school | 31 | 24% | 8 | 6% | 39 | 30% |
| Higher vocational school | 2 | 2% | 0 | 0% | 2 | 2% |
| Total | 98 | 77% | 30 | 23% | 128 | 100% |

Source: Own work

IV: Structure of the research sample focused on students from secondary schools (Target Group 2): type of secondary school and sex

| | Female | Percent | Male | Percent | Total | Percent |
|-----------------------------|------------|------------|------------|------------|------------|-------------|
| Grammar school | 0 | 0% | 0 | 0% | 0 | 0% |
| Business academy | 198 | 45% | 56 | 13% | 254 | 57% |
| Secondary vocational school | 116 | 26% | 72 | 16% | 188 | 43% |
| Higher vocational school | 1 | 0% | 0 | 0% | 1 | 0% |
| Total | 315 | 71% | 160 | 36% | 443 | 100% |

Source: Own work

studying secondary vocational schools and 2% were from higher vocational schools. The structure of the Target Group 2 (Tab. IV) was determined by the selection of the schools where the interactive accountancy teaching was presented. 57% students were from business academies, 43% students from secondary vocational schools. Grammar schools were excluded since accountancy is not taught there.

The survey data were processed by first and second degree classification to find out potential dependence. The relations between factors influencing university choice and sources of information were analyzed by means of contingency tables. The dependence between monitored factors was tested by means of chi-square test of independence. Chi-square test of goodness of fit was used to specify the influence of individual criteria at university choice as well as to specify the importance of individual information sources. The factor analyse was made for both the analysed criteria.

RESULTS AND DISCUSSION

The processed results show that, at the time when the survey was conducted, 66% respondents were not decided yet which university to apply to. This confirms that it is important for universities to take part in the Gaudeamus fair as they can still influence the potential applicants' choice. 23% students were already decided which school to apply to, the most frequently mentioned schools were Masaryk University (42 respondents), Brno University of Technology (17 respondents) Private College of Economic Studies Znojmo (9 respondents) and University of Economics, Prague (9 respondents).

Next question found out which criteria are the most important for the respondents' university choice. Respondents could choose up to three options. The most significant criteria for university choice are following: high quality of teaching (31% answers), total financial costs of the study (26% answers), the opportunity of internship and study abroad (27% answers). The second factor (the total costs) should be considered in the light of potential applicants' communication particularly by private schools. As they charge tuition fees, it is necessary to advertise the added value the students get and to present the comparison of total costs of study at a private and a public school. In some cases the costs

can even be at the comparable level, which many students are not able to imagine and calculate.

Next survey question dealt with the information source about universities. Respondents could choose up to three options. More than third (36%) answers identified universities' internet sites. In this case it is important to strengthen the importance of internet sites in marketing communication, to focus on their traceability on the internet, make them attractive and user-friendly both for the students and the public and to ensure that all the necessary information is easy to find. 18% students are influenced by their friends' or acquaintances recommendation. 16% students take as information source education fairs (resp. directly Gaudeamus fair in Brno), which was very relevant as part of the questionnaires was completed by the Gaudeamus attendants who came there to search for information. What is really interesting is the fact that secondary school students are not influenced by daily press at all. Advertisements in daily press are, therefore, absolutely useless. The only segment which might be influenced by this type of communication is the parents, who can play a role at the decision-making process.

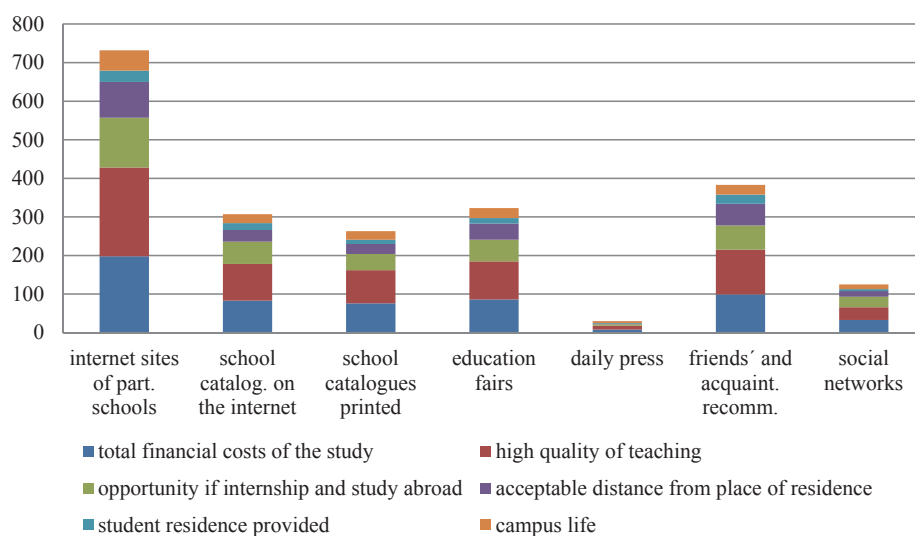
Figs. 3–8 show the results of second degree of data classification where the information sources and factors influencing university choice are compared. The following Figs. 3–5 focus on comparison which factors influencing university choice are searched for in different sources of information. The graphs are processed not only for the whole sample of respondents but they are also divided into categories whether the respondents are decided which university to apply to or not. The answers in categories "others" were excluded from the graph processing owing to low frequency in order not to distort the graphs.

The distribution of particular information sources frequency (Tab. V and Fig. 3) mirrors the above-mentioned results. The most frequent information source is the internet sites of particular schools searched by applicants themselves. Next most frequent information source is friends and acquaintances followed by education fairs. Respondents looking for information here are most interested in quality of teaching, total study costs and the opportunity of internship and study abroad. The order of factors structure corresponds with the results of first degree classification.

V: Absolute and relative frequency distribution of all respondents' answers regarding information sources

| | Internet sites of particular schools | School catalogues on the internet | School catalogues printed | Education fairs | Daily press | Friends' and acquaintances' recommendation | Social networks | Others | Total |
|-------------------------------|--|---|---------------------------------|--------------------|----------------|--|--------------------|--------|--------|
| Absolute frequency | 430 | 153 | 127 | 194 | 13 | 214 | 72 | 7 | 1210 |
| Relative frequency | 35.5% | 12.6% | 10.5% | 16.0% | 1.1% | 17.7% | 6.0% | 0.6% | 100.0% |

Source: Own work

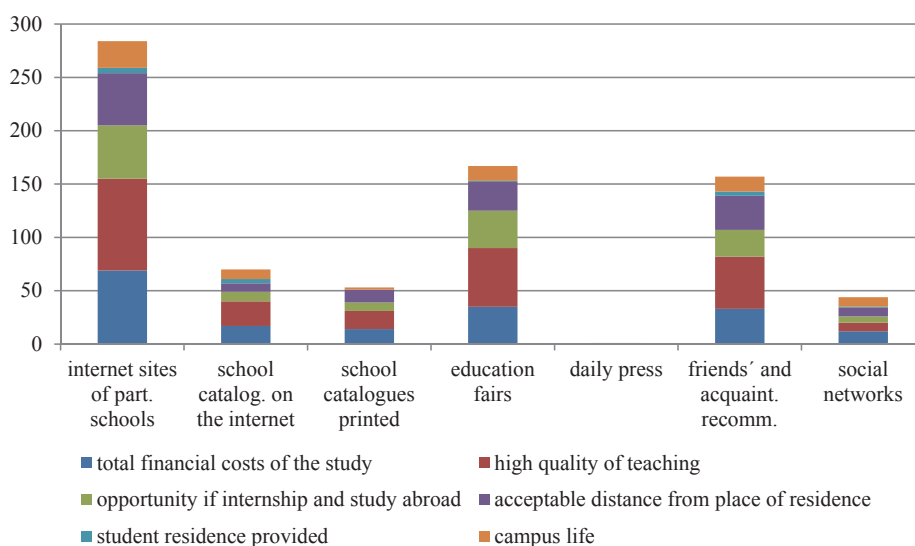


3: Information sources with representation of individual factors on the total sample of respondents
Source: Own work

VI: Absolute and relative frequency distribution of decided respondents' answers regarding information sources

| | Internet sites of particular schools | School catalogues on the internet | School catalogues printed | Education fairs | Daily press | Friends' and acquaintances' recommendation | Social networks | Others | Total |
|---------------------------|--------------------------------------|-----------------------------------|---------------------------|-----------------|-------------|--|-----------------|--------|--------|
| Absolute frequency | 122 | 29 | 22 | 68 | 1 | 63 | 19 | 1 | 325 |
| Relative frequency | 37.5% | 8.9% | 6.8% | 20.9% | 0.3% | 19.4% | 5.8% | 0.3% | 100.0% |

Source: Own work



4: Information sources with representation of individual factors on the sample of decided respondents
Source: Own work

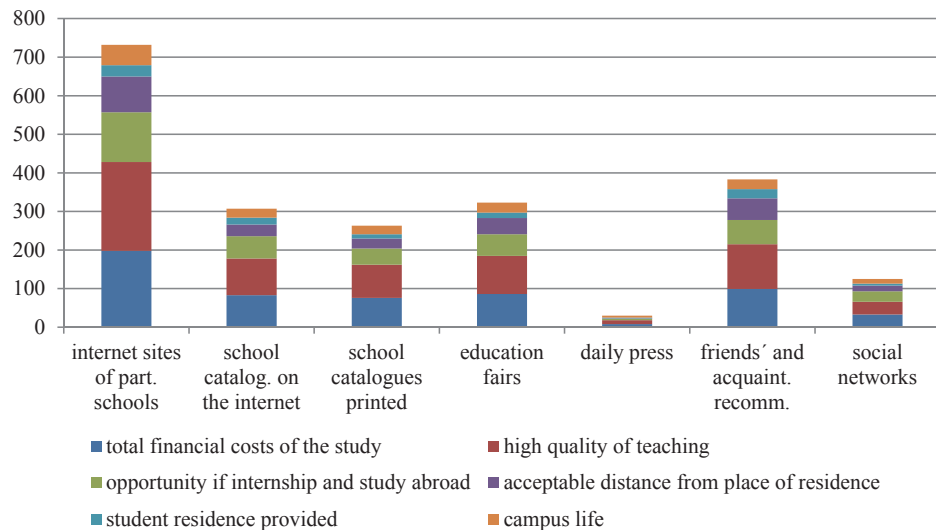
There is a minor change in the structure of represented information sources on the sample of respondents who had already decided which school to apply to (Tab. VI). Here again, the most frequent information source is the internet and, again, the respondents are most interested in the quality

of teaching and in total costs, however, nearly the same percentage of students were interested in the opportunity of internship and study abroad as well as the acceptable distance from the place of residence (Fig. 4). Next, this group of respondents searched information in the education fairs

VII: Absolute and relative frequency distribution of undecided respondents' answers regarding information sources

| | Internet sites of particular schools | School catalogues on the internet | School catalogues printed | Education fairs | Daily press | Friends' and acquaintances' recommendation | Social networks | Others | Total |
|---------------------------|--------------------------------------|-----------------------------------|---------------------------|-----------------|-------------|--|-----------------|--------|--------|
| Absolute frequency | 308 | 123 | 105 | 127 | 12 | 151 | 54 | 6 | 886 |
| Relative frequency | 34.8% | 13.9% | 11.9% | 14.3% | 1.4% | 17.0% | 6.1% | 0.7% | 100.0% |

Source: Own work

5: Information sources with representation of individual factors on the sample of undecided respondents
Source: Own work

and the third most frequent information source was friends and acquaintances. The structure of information was very similar. Representation of the answer regarding the daily press was lower than 1%.

On the sample of undecided applicants the structure again corresponds with the structure on the whole sample of respondents, the most frequent information source is the internet, friends and acquaintances and education fairs (Tab. VII). The information searched for as well as their order is the same as on the whole sample of respondents, i.e. the high quality of teaching, study costs and the internship opportunity (Fig. 5).

The following Figs. 6–8 deal with the opposite issue; they analyse respondents' answers from the point of view of the factors influencing the university choice depending on the information

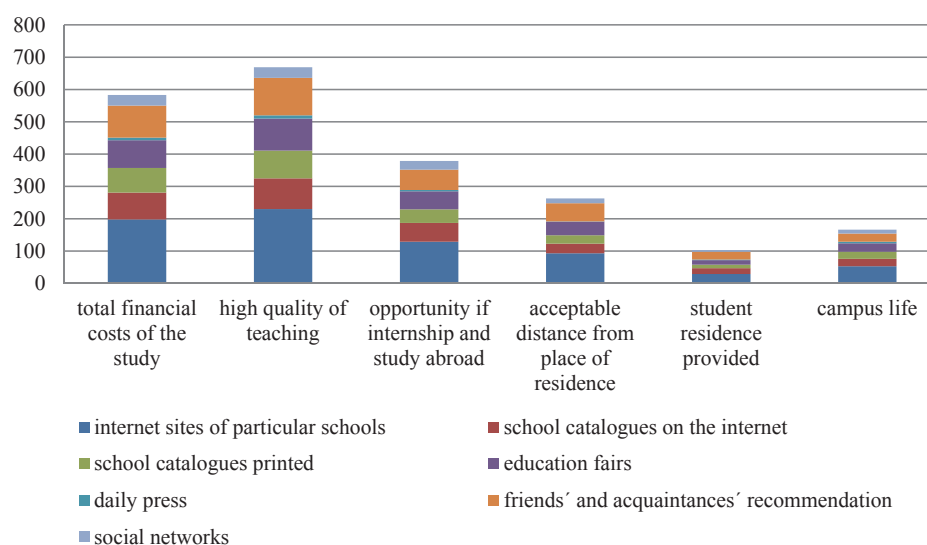
sources. Tab. VIII shows again which factors are the most important for the respondents. As shown in Fig. 6, the structure of information sources is similar at the three most frequent factors as well. The respondents who consider the high quality of teaching, total study costs and the opportunity of internship abroad as the most important factors search for information most often on web sites of particular universities, they trust their friends and acquaintances and attend educational fairs.

For the respondents who, at the time of the survey, were already decided which school to apply to the quality of teaching, total study costs and distance from the place of residence are the most frequently quoted factors (Tab. IX). The first two factors are mostly searched for on the internet sites and education fairs, the next source is friends and acquaintances. The factor of distance from the place

VIII: Absolute and relative frequency distribution of all respondents' answers regarding factors important for university choice

| | Total financial costs of the study | High quality of teaching | Opportunity of internship and study abroad | Acceptable distance from place of residence | Student residence provided | Campus life | Others | Total |
|---------------------------|------------------------------------|--------------------------|--|---|----------------------------|-------------|--------|--------|
| Absolute frequency | 311 | 379 | 208 | 165 | 45 | 92 | 17 | 1217 |
| Relative frequency | 25.6% | 31.1% | 17.1% | 13.6% | 3.7% | 7.6% | 1.4% | 100.0% |

Source: Own work



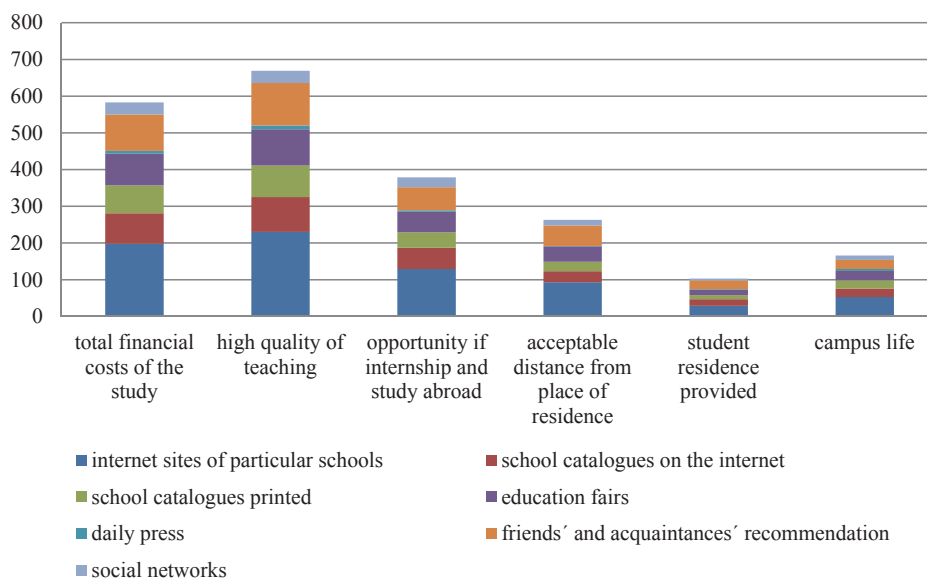
6: Factors influencing university choice with representation of individual sources of information on the total sample of respondents

Source: Own work

IX: Absolute and relative frequency distribution of decided respondents' answers regarding factors important for university choice

| | Total financial costs of the study | High quality of teaching | Opportunity of internship and study abroad | Acceptable distance from place of residence | Student residence provided | Campus life | Others | Total |
|---------------------------|------------------------------------|--------------------------|--|---|----------------------------|-------------|--------|--------|
| Absolute frequency | 76 | 97 | 54 | 55 | 5 | 27 | 6 | 320 |
| Relative frequency | 23.8% | 30.3% | 16.9% | 17.2% | 1.6% | 8.4% | 1.9% | 100.0% |

Source: Own work



7: Factors influencing university choice with representation of individual sources of information on the sample of decided respondents

Source: Own work

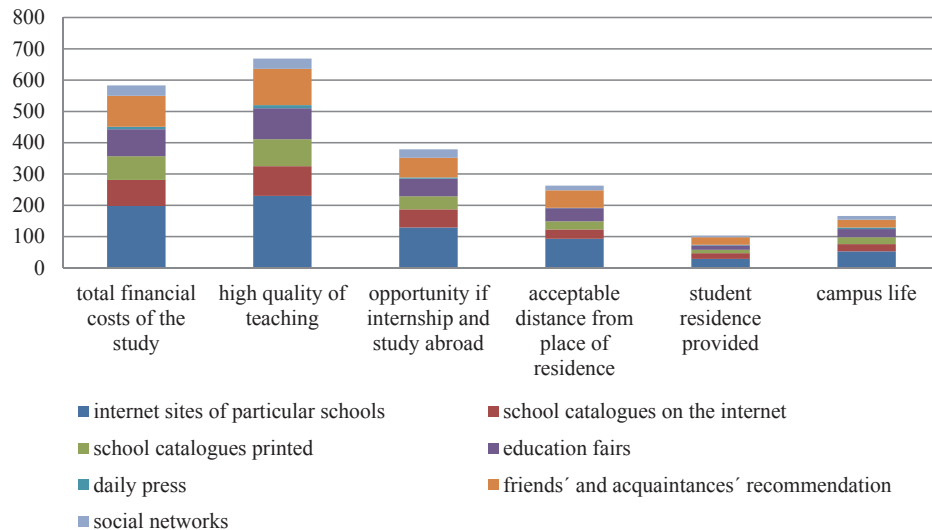
of residence is searched for on the internet, next from friends and acquaintances and the education fairs come third (Fig. 7).

A similar situation as on the total sample of respondents is on the sample of undecided respondents. They again prefer high quality of

X: Absolute and relative frequency distribution of undecided respondents' answers regarding factors important for university choice

| | Total financial costs of the study | High quality of teaching | Opportunity of internship and study abroad | Acceptable distance from place of residence | Student residence provided | Campus life | Others | Total |
|---------------------------|------------------------------------|--------------------------|--|---|----------------------------|-------------|--------|--------|
| Absolute frequency | 235 | 282 | 154 | 109 | 40 | 65 | 11 | 896 |
| Relative frequency | 26.2% | 31.5% | 17.2% | 12.2% | 4.5% | 7.3% | 1.2% | 100.0% |

Source: Own work



8: Factors influencing university choice with representation of individual sources of information on the sample of undecided respondents

Source: Own work

teaching, then total study costs and opportunity of internship abroad (Tab. X). A similar structure is at the information sources where they search for the factors (Fig. 8). They most frequently search the internet and ask their friends and acquaintances. In the third place there are with equal share education fairs and online catalogues. In case of opportunity of internship and study abroad the online catalogues even come second.

From the above mentioned facts clearly follows that the most important factors influencing university choice of the secondary school students are high quality of teaching, total study costs and then the opportunity of internship or study abroad. The most important information source is definitely the internet, more precisely the particular universities' sites, followed by friends' and acquaintances' recommendation and the next important source is the education fairs.

To prove if there is any dependence between the two characteristics, chi-square test of independence was used. First, two hypothesis were stated; null hypothesis H_0 , which supposes that the analysed characteristics are mutually independent, i.e. there is no dependence between the information sources and factors important for university choice. On the other hand, alternative

hypothesis H_A supposes that there is a certain dependence between these two characteristics.

H_0 There is no dependence between information source and university choice factor.

H_A There is dependence between information source and university choice factor.

By means of test criterion it is possible to determine whether we can reject the null hypothesis or not.

The formula for test criterion calculation:

$$\chi^2 = \sum_{i=1}^l \sum_{j=1}^m \frac{(n_{ij} - n'_{ij})^2}{n'_{ij}},$$

where

n_{ij} , $i = 1, 2, 3, \dots, l$, $j = 1, 2, 3, \dots, m$ – observed frequencies,

$n'_{ij} = \frac{n_i \times n_j}{n}$, $i = 1, 2, 3, \dots, l$, $j = 1, 2, 3, \dots, m$ – theoretical

frequencies.

If the test criterion is lower or equal to the value for the given degrees of freedom than the null hypothesis cannot be rejected and the tested characteristics can be considered independent. In the Tab. XI we can see that the test criterion (20.15) is lower than the critical values of the levels of significance, both $\alpha = 0.05$ (43.77) and $\alpha = 0.01$

XI: *Chi-square test of independence*

| Test criterion | Degrees of freedom | Level of significance | |
|----------------|--------------------|-----------------------|-------|
| | | 0.05 | 0.01 |
| 20.15 | 30 | 43.77 | 50.89 |

Source: Own work

(50.89), i.e. the null hypothesis of independence of the tested characteristic cannot be rejected. It means that dependence between the factors important for university choice and the information sources cannot be proved.

The following hypothesis was formulated to specify the influence of individual university choice criteria:

H_0 : All the criteria are of the same importance level in the decision-making process of respondents.

H_A : The hypothesis H_0 is not valid.

The formula for test criterion calculation:

$$\chi^2 = \sum_{i=1}^m \frac{(n_i - n'_i)^2}{n'_i},$$

where

n_i , $i = 1, 2, 3, \dots, m$ – observed frequencies,

$n'_i = \frac{n_i}{n}$, $i = 1, 2, 3, \dots, m$ – theoretical frequencies.

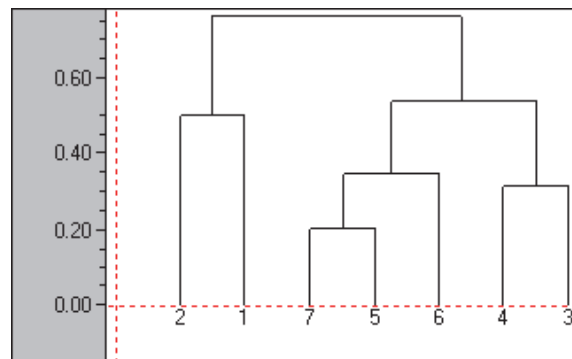
The hypothesis was tested by the means of chi-square test of goodness of fit (Tab. XII). The test rejects the hypothesis H_0 (the value of the chi-square test 12.69 at the level of significance $\alpha = 0.05$ and 16.81 at the level of significance $\alpha = 0.01$ is significantly different from the test criterion 632.96), which means that individual criteria have different level of importance and, therefore, it makes sense to carry out the factor analysis of decision-making criteria.

XII: *Chi-square test of goodness of fit – factors influencing university choice*

| Test criterion | Degrees of freedom | Level of significance | |
|----------------|--------------------|-----------------------|-------|
| | | 0.05 | 0.01 |
| 632.96 | 6 | 12.59 | 16.81 |

Source: Own work

The first carried out factor analysis shows that factors as performance requirements and quality of teaching and total study costs all reach the same level of importance as the other factors – the opportunity of internship abroad and acceptable distance from the place of residence together with the group of factors of student residence provided, campus life and others. Using each of these groups at communication with applicants will address almost the same number of them from the perspective of the information content.

9: *Factor analysis of criteria for university choice*

Source: Own work

XIII: *Criteria coding to Fig. 9*

| Criteria |
|---|
| 1 Total financial costs of the study |
| 2 High quality of teaching |
| 3 Opportunity of internship and study abroad |
| 4 Acceptable distance from the place of residence |
| 5 Student residence provided |
| 6 Campus life |
| 7 Others |

Source: Own work

The following hypothesis was formulated to specify the influence of individual information sources:

H_0 : All the information sources are of the same importance level in the decision-making process of respondents.

H_A : The hypothesis H_0 is not valid.

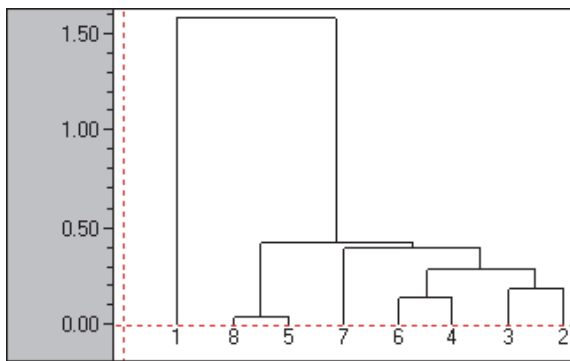
The hypothesis was tested by the means of chi-square test of goodness of fit (Tab. XIV). The test rejects the hypothesis H_0 (the value of the chi-square test 14.07 at the level of significance $\alpha = 0.05$ and 18.47 at the level of significance $\alpha = 0.01$ is significantly different from the test criterion 861.21), which means that individual criteria have different level of importance and, therefore, it makes sense to carry out the factor analysis of information sources.

XIV: *Chi-square test of goodness of fit – sources of information*

| Test criterion | Degrees of freedom | Level of significance | |
|----------------|--------------------|-----------------------|-------|
| | | 0.05 | 0.01 |
| 861.21 | 7 | 14.07 | 18.47 |

Source: Own work

Factor analysis was carried out also for information sources used by secondary school students. A significant group of sources is created by friends' and acquaintances' recommendation, education fairs and school catalogues on the internet as well as printed ones. The most essential information source from the students' perspective is the internet, namely searching for the websites of particular



10: Factor analysis of information sources

Source: Own work

universities. None of the other sources can compete with this source. Sources as daily press, social networks and other sources are only complementary and of minor importance.

From the above mentioned data it is clear that universities can focus on different groups of factors and sources in their communication to potential students. In practise it means that if universities want to focus on factors influencing applicants' decision-making process, they can include in their

XV: Sources coding to k Fig. 10

| Sources | |
|---------|--|
| 1 | Internet sites of particular schools |
| 2 | School catalogues on the internet |
| 3 | School catalogues printed |
| 4 | Education fairs |
| 5 | Daily press |
| 6 | Friends' and acquaintances' recommendation |
| 7 | Social networks |
| 8 | Others |

Source: Own work

communication either the factors of high quality of teaching and total financial costs of the study or the factors of accommodation, campus life, acceptable distance and opportunity of internship and study abroad. Focusing on either of these groups will address almost identical number of applicants. In case of sources there are three groups. In this field should not focus only on the most important source of information – websites of universities, but also on the others based on personal contact with potential students (friends' and acquaintances' recommendation, attendance in education fairs).

CONCLUSION

Increasing pressure of society and growing education requirements by employers in the last years caused higher interest in university education. The tertiary education market reacted to the situation and this led to an increasing number of universities and colleges, above all the private ones. However, in the last two years there was a significant fall in the number of secondary school graduates as these students were born in demographically weak years. The coincidence of these factors influences the situation at education market and the universities are forced to compete for students. In the fierce competition, individual marketing communication tools should be used to address the potential applicants and to persuade them to choose the particular university.

This article deals with the role of marketing communication at university choice and it should specify what factors are important for potential applicants at university choice and where they search for information. A primary research was conducted to find out the relevant information. The respondents were the attendants of the education fair Gaudeamus and secondary school students from schools where interactive accountancy teaching was presented.

The survey shows that at the time of the research 66% of respondent were not decided yet which university to apply to. The most frequent information source was internet sites of particular schools, information from friends and acquaintances and education fairs. The situation was also similar after distinguishing the respondents into decided/undecided (which university to apply to) categories. Nowadays, social networks are highly popular; however, this trend was not confirmed with relation to the search for information about universities. Regarding factors important for university choice, the most preferred factors were high quality of teaching, total study costs and the opportunity of internship or study abroad. Only the decided respondents preferred the factor of acceptable distance from the place of residence to the factor of the opportunity of internship or study abroad.

In the statistic research chi-square test was used to test possible dependence between the two mentioned characteristic (factors and information sources). On the basis of the calculated values the null hypothesis of independence was not possible to reject. That means that mutual dependence between preferred factors and information sources cannot be assumed. By the means of factor analysis important groups of criteria and information sources were formulated.

In the area of communication channels universities should, above all, focus on internet communication as it is the main information source for most applicants. They should simplify their websites and online communication so that the important information is easily available. The next most important information sources are those on the basis of personal meeting or recommendation. This confirms previous research results that the internet and personal recommendations are the most significant sources. Personal recommendations are among the most trustworthy marketing communication. It is

necessary to maintain excellent relationships with the current students as well as with the alumni because they can be an important part of WOM communication, which can positively influence potential applicants at their decision-making process. Although social networks are not considered to be a significant information source it should be taken in to account as a complementary tool to support other more important communication tools.

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