Network Reputational Risks of the Educational Institution

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ABSTRACT
Development of the global information space is the basis of change in the educational paradigm and the formation of the world market of educational services. Traditional educational institutions face new challenges and risks that undermine their competitiveness. This implies the emerging phenomenon of online reputation risks, with significant regional characteristics. This paper first examines the emergence of online reputation risk for the Kazakh education. It shows how particular risks of educational institutions multiply the risks of reputation as regards regions and the country overall. Countering online risks and the positive e-reputation development should be part of a unified governmental and educational strategy. Empirical data justified the need to include the program of online reputation development into the strategic development plans at the level of local educational institutions.

KEYWORDS
Online reputation risks, the Internet space, social networks, generational gap, the crisis of reputation.

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Introduction
Recent years showed greater interest in the risk theory in view of the global crisis expansion and the emergence of new forms and types of risk. Redefining the concept of risk changed its content - from the perception of risk as damage or an iminent risk of loss to the possibility of getting excessive profit. In a market economy, risk presents a constant element of entrepreneurship. The very nature of the market creates new kinds of uncertainty and implies risks.

Reputation has a great value and shapes stakeholder behavior to influence future value. A collection of perceptions and opinions, past and present, about an organization which resides in the consciousness of its stakeholders (Rayner, 2004).

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Risk is a fundamental element of a company's sustainability strategy. The identification of the risk sources and their analysis is critical. The relationship between the different types of risk, combination of the different types of risks and integrated effect of these risks should be considered in managing reputation both strategically and sustainable way (Joosub, 2006).

Risk management is a vital part of the internal management processes of the organization. Companies should set a strategy for reputation risk management, define the objectives, and set the metrics by which reputation damage is measured. Because insurance is not available to protect firms against the loss of reputation value after a reputation damaging event, communication with the media and key stakeholders is discussed as a risk mitigation strategy (Regan, 2008). Risk management is essential to create value in volatile business world.

Development of the new external environment, the Internet, gave rise to a new type of risk. Reputation risks are highlighted in the age of globalization and information technology development. Canadian studies show that "lowering the reputation level by one point is associated with a market loss of approximately $5 billion, if this methodology is applied to 50 of quotation leaders on the U.S. stock exchange" (De Marcellis-Warrin & Teodoresco, 2012). The Kazakh companies are increasingly exposed to different online risks. Over the past year, every third organization was subjected at least once to cyber-attacks aimed at them (Huttenlocher, 2016).

The most dangerous internet risks are the risks related to financial theft, information security and reputational risks. This study is focused on the online reputation risks related to the higher educational institution – the Karaganda State Medical University.

Considering e-reputation within the product-related, marketing approach, we come to the basic principles of its regulation. Any company should bring its reputation in line with the production content and consumer demands. It is necessary to agree on what the company is, what it does and how it is represented on the web.

For the Kazakh science, the problem of reputation risks, emerging on the web space, is new both in terms of object, and in terms of content. This study first examined the applicability of the e-reputation concept for the Kazakh Russian-speaking Internet users. Higher educational institutions of the Republic are involved in a global educational process; however, they are completely unprepared for the threats and risks arising in the virtual information environment.

The study of problems related to e-reputation in Kazakhstan gives the possibility to identify general and specific trends in the global information space. Pursuant to classic interpretation, the category “risk” has the following characteristics (Litovskikh, 1999):
- Responsibility for the decision-making;
- Choice of solutions has predictable and probabilistic character;
- Defined likelihood of each alternative solution;
- Risks are associated with possible losses.

**Literature Review**
However, the generally accepted definition of economic "risk" has not been given so far. This is explained by the presence of many conflicting approaches to the definition of "risk" category. There are three main approaches to the definition of risk.

**Table 1. The main approaches to the definition of risk**

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<th>№</th>
<th>Approach</th>
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<tr>
<td>1</td>
<td>Risk as loss</td>
<td>Mill, Senior, Rastrigin, Riseberg</td>
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<td>2</td>
<td>Risk as uncertainty</td>
<td>Samuelson, Abchuk, Algin, Heine</td>
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<td>3</td>
<td>Risk as possibility</td>
<td>Marshall, Pigou, Knight, Schumpeter</td>
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Oakes (2002) had put his attention on risks and wrongs in Social Science Research and found that the IRB system did not spontaneously appear from the ether to frustrate researchers and create bureaucratic obstacles. Pursuant to policy recommendations (Ellis, 1999; General Accounting Office, 1996), his research was aimed to help social scientific evaluators better understand IRBs and thereby enhance the protection of research subjects.

T. Roberts & J. McInnerney (2007) identified seven problems of online group Learning, that are: 1) student antipathy towards group work; 2) the selection of the groups; 3) a lack of essential group-work skills; 4) the free-rider; 5) possible inequalities of student abilities; 6) the withdrawal of group members; 7) the assessment of individuals within the groups.

A. Jøsanga, R. Ismailb & C. Boyda (2007) proposed the basic idea to let parties rate each other and use the aggregated ratings about a given party to derive a trust or reputation score, which could assist other parties in deciding whether or not to transact with that party in the future. A natural side effect was that it also provided an incentive for good behavior, and therefore tended to have a positive effect on market quality.

M. Huber (2011) outlined a first attempt to investigate the identification strategies of academic risks. Based on a limited set of risk registers developed by universities covering the entire range of English universities, his research presents three major findings: universities could not capture the core functions of universities, teaching and research, with organizational means; universities had to find proxies that they could link up with organizational decisions; when universities identified academic risks, structural features such size, international and research orientation or the degree of collegiality in decision making shaped the way academic risks were defined.

L. Ruzic-Dimitrijevic & J. Dakic (2014) tried to connect and apply their knowledge in risk management in other areas, as well as the knowledge gained by their experience in managing the higher education institution. They used the example of one higher education institution in analyzing the risk, and developed the initial model with corrections in accordance to specifics and conditions.

Corporate Reputation is one of the critical intangible assets for companies as seen following list (Rayner, 2004): 1) leadership & governance; 2) people, skills and culture; 3) innovation; 4) intellectual property; 5) brands; 6) knowledge management; 7) communication; 8) business relationships; 9) corporate reputation. Corporate reputation is vital for companies and enhances the firm’s transactional capacity. Consequently, the risks generated by reputation can lead to opportunities as well as threats. In fact, subjective and multidimensional approaches (consumer, product and situation characteristics)
evidence that (Gaultier-Gaillard & Louisot, 2006) the concept of reputation is very broad and considered an intangible asset and the management of risks linked to reputation offers therefore long-term protection for brands. Also reputation building is a long-term effort, a trust base on which the firm’s image is forged and organized.

Corporate reputation has long been recognized as a critical success factor in marketing a service (Eunsang, Hugh & Valerie, 1993; Thomas, 1978). A good reputation is considered as an asset that can enhance the buyer’s expectation regarding the company’s offerings (Shapiro, 1983). The reputation of a marketers enhances communication effectiveness (Mc. Ginnies, 1973; Tellis & Fornell, 1988). Within the past few years, the importance of intangible assets in general and the significance of corporate reputation in particular have grown rapidly. To create market entry barriers, to foster customer retention, and thus to strengthen competitive advantages, intangible assets are vitally important. Creating and exploiting them allows companies to drive markets, rather than to be market driven.

The first fundamental academic book on corporate reputation was published by Ch. Fombrum (1996) and can be considered to be a starting point in the development of reputation management as a separate academic discipline and research field. Moreover, corporate reputation represents a company’s status among employees and external stakeholders compared to its rivals.

From a bit different perspective corporate reputation is defined by another author: “reputation is the belief and trust that a variety of people have for your organization and they expect the same attribute in future” (Honey, 2009).

M. Eisenegger (2009) says that the reputation of all agents in our society invariably consists of three components: functional reputation, social reputation and expressive reputation.

Corporate reputation directly affects the strategic behavior patterns of a firm and the observable characteristics of the manner in which an organization performs decision-making and planning function with regard to issues that are of strategic importance to its survival, growth and profitability (Oghojafor, 2007). Corporate reputation is directly related to the corporate identity of company and it is interpreted as an organization’s ethos, goals and values that create a sense of belonging among company’s stakeholders (George, Owoyemi & Onakala, 2012).

The "Online reputation risks" is a new concept associated with the emergence of the term «E-reputation» or network reputation (e-reputation). The use of this term started in 2000, but its mass use provided the growing popularity of social networks. The first definitions were given by E. Fillias & A. Vilnev (2013): "e-reputation is a user’s view related to a brand or personality".

The authors adhere to the subjective approach to the definition of e-reputation, according to which e-reputation is not the outcome, but the result of relations. Considering the e-reputation as a "network image", the position of the company becomes passive. Defining e-reputation as an action for image management, the organization takes a proactive stance in dealing with networks. According to this approach, e-reputation is a combination of control techniques and strategies, and it is exposed to discredit risk.
Before the 2000s, reputation risks were not considered as a separate category. Nevertheless, e-reputation emerges and remains on the web for a long time. New communication options, such as social networks on smartphones, led to the emergence of new risks and their active influence. Online reputation risk was recognized through the emerging crises. Stuart et al. (2012) identified the following types of reputation crises: the malicious distortion of symbols, information leakage, negative statements and slander. There are three stages of reputation risk development: the emergence of negative information, the formation of hostile communities and mass information warfare (info war) involving previously unaffiliated media.

The author believes that the proposed typology could be applied to the classical definition of risk environment according to its levels. Reputation risks of the external environment are determined by the country's image in the international scene. All organizations belonging to this or that state bear the risk of reputation transfer.

**Aim of the Study**

The aim of this study was to examine the occurrence of online reputation risks by the example of Kazakh universities, particularly, the Karaganda State Medical University (KSMU).

**Research questions**

The overarching research question of this study was as follows:

How the occurrence of online reputation risks influences the organization in the whole by the example of Kazakh universities, particularly, the Karaganda State Medical University (KSMU).

**Method**

The use of content analysis of online KSMU materials revealed e-reputation risks related to this university. KSMU is seeking to consolidate its grip on the international education market and PR-strategy mistakes reduce its competitiveness.

The study used a multilevel approach to risk assessment. The particular e-reputation of KSMU was studied in conjunction with the reputation risks related to the region and the country overall. The use of this multiplying approach allowed considering the risks of each entity acting on territorial entity.

**Data, Analysis, and Results**

The immediate environment creates its own group of risks. These include territory reputation risks. The region's image presented on the internet resources is part of the organization's e-reputation, located in the same area.

Internal circle or the internal environment (organizations) - creates the risk of internal communication. The interaction with stakeholder groups (stakeholders) is an important factor of the e-reputation. This classic risk of communication with agents of influence has the additional risk, which the author calls "the risk of generation gap". It appears today, along with the launch of the Y and Z Generations. These generations realize their communications through social networks, and the mass distribution of mobile Internet transformed them into daily practice of social and economic life.
The companies are viewed as ecosystems containing several "circles". The inner circle contains the company’s stakeholders: employees, customers and investors. Relations with them are the basis for the reputation development. Partners having significant impact form the second “circle”. The mentioned author does not distinguish the third “circle”, however, in his opinion, the region’s and the country’s external environment have qualitative differences. Each of these presents a separate ecosystem having its specific features. Development of e-reputation for each of the parties involved demands development of appropriate content, with regard to its specificity (Chun & Davies, 2001).

The Kazakh online community (Kaznet) is developing rapidly. "Just in the past decade, the number of Internet users was less than 4% of the population, today this figure reached 12 million people. In all cities and many regional centers of Kazakhstan citizens use the 3G Internet, and the 4G service is available in regional centers, the FTTH wire technology is introduced in parallel". This was noted by A. Zhumagaliev, Deputy Minister for Investment and Development (International Information Agency “Kazinform”). The coverage level reaches 60% in cities, which population is up to 500,000, in urban areas with more than 1 million inhabitants - about 70%, but in rural areas, this index is below 40%.

The age structure of Kaznet shows the highest virtual activity of Kazakhs aged 25-34 and over 45 (Figure 1). This is determined by not only the wealth rate of these age groups and their access to the Internet, but also by their activity in the Internet space, due to their personal, business and social interests.

![Figure 1. The age structure of Kaznet users. Source: The Kazakhstani ranking (2015). The internet statistics service.](image-url)

The suggested methodological principles are confirmed by the e-reputation development in the research object – the Karaganda State Medical University.
The content analysis of KSMU online materials revealed the e-reputation risk for this university.

This study used a model of typical behavior of Kazakh user during online searching. According to Liveinternet.ru, which is the largest statistical online database, the main search engines used by the Kazakh Internet users are Google - 57.2% and Yandex - 30.5% (Liveinternet, 2015). The use of the third most popular search engine - Mail.ru demonstrates a constant downward trend: in August 2012 - 20%, in February 2015 - less than 12%. The use of other search engines makes less than 1% (Liveinternet, 2015).

According to surveys carried out by the American company Iprospect.com, most of the users (31.9%) only look through the first page of results, and then move to one of the suggested sites, 16.1% - choose one of the first three links, 23%, view the first two pages before selection (Internet Agency “Artus”). These data are confirmed by the fact that nearly half (48%) of internet users click on links displayed on the first page. The analysis was based on the first two pages of search results of the two most popular search engines (Google and Yandex). The name of the university was entered in the query field. The positive moment is that the name automatically appeared among the first tips in the Google search bar. The impact of materials on e-reputation was assessed by the tone of materials (positive, neutral, negative).

Among the Google search results, 80% of the materials contained the background and contact information about the university. One of the materials contained the university presentation. There is an official website, but an article in Wikipedia is not finished. The first link goes blank, and few sites contain feedback fields, where potential students can put their questions. Link to accounts do not come out first in social networks, although it is one of the main ways to get information from youth. Contextual advertising is absent.

The Yandex search gave similar results. The first two pages displayed almost the same links, but in a different order. 2% of the displayed references were empty. They did not contain information, or were not related to the university (other University account in social networks). 10% of references were duplicated twice. Almost all references contain a summary of the institution; only two sites contain detailed information, apart from the official website.

Although the search results displayed positive e-reputation of the University, it is exposed to the reduction risk due to several criteria. The principle of coherence was violated. The entire set of search results had to be coherent and consistent. KSMU materials are fragmentary and do not contain a common clear message for a common reputation.

There is little quantitative data available online, related to the university activities. This violates the principle of reasonableness. The e-reputation development should be provable and should reinforce the elaborated discourse. Unfortunately, the principle of interestedness is not observed as well. KSMU materials have few hyperlinks.

Historicity is an important principle and risk control parameter. The ability to store and to retrieve information of any period creates both opportunities for e-reputation development and risks related to its destruction. The historicity of negative information related to the external environment creates one of the most significant risks for KSMU. The e-reputation of the Karaganda region is
contradictory, being burdened with the materials related to the negative events of the past.

About one third of sites related to Google and Yandex search engines contain only some information about the region, they do not form any evident opinion regarding the region. Only the first 20 pages that appeared in search results were considered for data obtainment. Taking into account the errors and system failures on some sites, it was possible to investigate only 73 of these pages.

33% of these pages are characterized by a foreign hosting (Russian, Ukrainian, international). Most materials on such sites contain data obtained from local and international news agencies or the materials borrowed from the Kazakh sites. As a rule, these are the news related to politics, economy, culture and sports. Among them there are www.magnolia.com.ua, ru.wikipedia.org, www.nomad.su and others, most of them are news resources.

Verification showed that 29% of all the pages contain more than one message corresponding to the search parameters, but only 8% refer to other messages, put on the same site before or on other web sites. This means that the image generated by the page is automatically enhanced by several times. Due to the region’s mentioning in a positive context, positive e-reputation is formed. The interestedness parameter, which makes 8%, presents the likelihood of risk.

Moderate risk generates satisfaction with the quality and cost of Internet services in the region. According to the report "The business climate in 2014" more than one third of entrepreneurs of the Karaganda region were dissatisfied with the Internet resource quality in the area.

Research results showed that most of the materials presented on the Internet contain neutral information about the region (41%). These materials contained reference data, cross-cultural or promotional information (Figure 2).

![Figure 2. Results of the analysis of Internet materials related to the Karaganda region, %.
Source: compiled by the author.](image)

Data related to the number of inhabitants, industrial and agricultural production statistics, political information require constant updating with a view
to meet the reality. The data presented at various sites, having both Kazakh and foreign hosting, often vary a lot in one way or another depending on the date of publication.

Only 22% of the search result pages' form positive image of the region. In addition, some of them are put on the same website. Thematic sites dedicated to the cultural and sport life could be the example. The e-reputation of the Karaganda region is undermined by the fact that 37% of the examined pages form a negative image of the Karaganda region. The KSMU e-reputation has a high risk of "contamination" from the adverse image of the region, under such external information.

The author argues that likelihood of the "generational gap risk" is quite high. There are significant disparities between the Kazakh Internet audience and the content of the KSMU materials addressed to the Internet audience. The materials, intended to be used by the younger generation, are not relevant both by their form and content. In April 2015, the material "Applicant 2014" was put in the web section intended for one of the most important audiences; thus the principle of historicity was violated.

Such risks are inherent in all e-reputations of the Kazakh universities. The e-reputation review of the Kazakhstani higher educational institutions indicates low popularity of medical institutions (Stuart et al., 2012). According to the popularity ranking, the Asfendiyarov Kazakh National Medical University occupies the first place (Astana Medical University, 2015). The e-resource contains abundant information materials with visual illustrations. However, the principles of free communication are violated. The website of the University lacks forum or other platforms to get feedback from the applicants. The Medical University of Astana gives a clear description of specialties on its web site and thus provides the possibility of feedback for students through phone calls or social networks (Astana Medical University, 2015).

The Webometrics Ranking of World Universities (ranking of the world's best higher educational institutions) is held since 2004 by the Cybermetrics Lab located in the Information and Documentation Center of the National Research Council of Spain.

Webometrics analyzes representation of a certain university on the web. The selection criteria are determined by the evaluation of research achievements of universities through comparison of their research results put on relevant websites. The ranking criteria are defined by the level of support and popularity of web sites (Webometrics Ranking of World Universities).

The Webometrics assessment methodology is determined by the following indicators (Figure 3):

- External links (the number of unique external links to the site, found via Yahoo Search);
- The number of indexed pages (the number of pages in the search engines - Google, Yahoo, Live Search and Exhaled);
- The number of valuable files (the number of documents posted on the website in Adobe Acrobat, Adobe PostScript, Microsoft Word and Microsoft PowerPoint);
- Citation (the number of publications and citations, found using Google Scholar) (WEBOMETRICS: Ranking of World's Best Universities).
Figure 3. Webometrics indexes, %.
Source: WEBOMETRICS: Ranking of World’s Best Universities.

Figure 4 shows the top 10 universities of Kazakhstan, as well as ranking of
the Kazakhstani medical institutions. The first three positions are occupied by
the Gumilev Eurasian National University, Al-Farabi Kazakh National
University and the Kazakh National Agrarian University. The Kazakh medical
higher schools are included in the Webometrics list (Kazakh National Medical
University) took the 4th place according to the Kazakh list, 2837 place in the
world, Medical University of Astana, 25th place according to the Kazakh list,
8301 place in the world, South Kazakhstan State Pharmaceutical Academy,
43rd place according to the Kazakh list, 11762 place in the world, Semei State
Medical academy, 47th place according to the Kazakh list, 12683 place in the
world, Kazakhstan Medical University, 93rd place according to the Kazakh list,
19835 place in the world) (WEBOMETRICS: Ranking of World’s Best
Universities).

KSMU occupies the 35th position among the Kazakh universities in the
Webometrics ranking, and 9483 place in the world. At the same time, during the
past six months the KSMU rating increased by 879 points (10362 position in
December 2014).
Implications and Recommendations

Implications and recommendations for future studies are as follows:

- the "generational gap risk" is quite high and there are significant disparities between the Kazakh Internet audience and the content of the KSMU materials addressed to the Internet audience. The materials, intended to be used by the younger generation, are not relevant both by their form and content. In April 2015, the material "Applicant 2014" was put in the web section intended for one of the most important audiences; thus the principle of historicity was violated. Webometrics analyzes representation of a certain university on the web. The selection criteria are determined by the evaluation of research achievements of universities through comparison of their research results put on relevant
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The author views further development of research in terms of development of tools aimed at the prevention of reputation risks in the Internet space. The main areas of research are the following:

1. Monitoring of external information.
2. Control of internal information.
3. Personal work with stakeholders.
4. Consistent and flexible strategy aiming at the development of e-reputation.
5. Preventing hostile impacts.
6. Creation of a "circle of trust" and the anti-crisis group.
7. Professional actions related to network communications.

The Kazakhstani educational community should recognize the e-reputation relevance. Educational institutions of the Republic can carry out consolidated study of the trends and challenges related to this issue. Joint work aimed at the creation of the overall image of Kazakhstani education will increase the reputation of each participant. In practical terms, it is necessary to agree on ethical standards and create the framework protocol of conditions with a view to promote better educational rating in the national and international network.

Disclosure statement

No potential conflict of interest was reported by the authors.

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