Identification of Efficiency Factors for Control over Information and Communication Provision of Sustainable Development in Higher Education Institutions

IRINA GONTAREVA
Department of Marketing, Management and Entrepreneurship
V. N. Karazin Kharkiv National University
4 Svobody Sq., Kharkiv, 61022
UKRAINE
e-mail: ivgontareva@gmail.com

BOROVYK MARYNA
Departments of Management and Administration
O.M. Beketov National University in Urban Economy
17, Marshal Bazhanov Street, Kharkiv, 61002
UKRAINE
e-mail: borovik.marina@gmail.com

VITALINA BABENKO
International E-commerce and Hotel&Restaurant Business Department
V. N. Karazin Kharkiv National University
4 Svobody Sq., Kharkiv, 61022
UKRAINE
e-mail: vitalinababenko@karazin.ua http://international-relations-tourism.karazin.ua/Babenko

IRYNA PEREVOZOVA
Department of Entrepreneurship and Marketing
Ivano-Frankivsk National Technical University of Oil and Gas
15 Karpatska Street, Ivano-Frankivsk, 76019
Ukraine
perevozova@ukr.net

ANDRIY MOKHNENKO
Department of Finance, Accounting and Entrepreneurship
Kherson State University
Kherson
UKRAINE
mohnenkoas@gmail.com

Abstract: - The goal of this article is to study the theoretical grounds of control over information and communication provision for the sustainable development of higher education institutions in the modern conditions of management and definition of the basic terminology, including the definition of such terms as 'information and communication provision' and 'higher education institutions sustainable development' as well as definition of management efficiency factors for the control over information and communication provision for the sustainable development of higher education institutions on the basis of rating methodology used for the

analysis of activity of ten best higher education institutions in the world. The author used the following systematic approaches and methods: analysis, synthesis, induction, deduction, analogies, identification, generalization, abstraction, clarification and classification, graphic and statistical methods. The information base consisted of the works by foreign and national economists.

Key-Words: - information and communication support, sustainable development, institution of higher education, ratings

1 Introduction

20th century introduced a variety of new technologies and innovations that certainly changed not only the means and methods of production but also management methods [1, 2]. There has been an increase in share of areas, the main resources of which were information and information technologies. It is the information and the knowledge acquired with its help that have become the main resource of the new modern society [3, 4]. At the same time, there are significant changes taking place in the education system that is considered to be the source of knowledge. Nowadays, education is being transferred from a social institution into a self-contained system that is one of the biggest strategical resources needed for the sustainable development of country's economy and the society in general. In the modern conditions of Ukrainian society's development, the efficient functioning of the higher education institutions cannot be imagined without proper information and communication provision and the efficient control over it that is supposed to support and serve all the aspects of their activity. The use of modern information and communication technologies in the sphere of management of higher education institutions must promote the increase in quality, the accuracy and objectivity of information and, as a result, secure the effective and well-timed management decisions, aimed at sustainable development in higher education institutions. Such authors as M. Barna, V. Babenko, N. Berezniak, T. Grynko, M. Chorna, T. Gviniashvili, O. Dorokhov, Sv. Drobyazko, L. Karpenko, O. Karpinska, M. Koshevoi, B. Karpinsky, T. Kvasha, M. Matviiv, M. Novikova, M. Milyavskiy, T. Hilorme, O. Osinska, M. Pasmor, J. Pankova, M. Sidorov, V. Ponomarenko, D. Pawliszczy, I. Smachylo, T. Pysarenko, O. Prudka, I. Vasylkiv, A. Shevtsiv, G. Us and others dedicated their works to the study of theoretical and practical aspects of the role of higher education in terms of modern information society formation as well as to the study of sustainable development provision in higher education institutions in the modern conditions of management.

2 Problem Formulation

At the same time, the still undeveloped issues include the essence of higher education institutions sustainable development and the grounds for the need in managing information and communication provision in order to achieve the sustainable development in higher education institutions. The questions of determining and substantiation of factors that influence the efficiency of managing the information and communication provision for the higher education institutions sustainable development are still being discussed.

2.1 Methodology

The author used the following systematic approaches and methods: analysis, synthesis, induction, deduction, analogies, identification, generalization, abstraction, clarification and classification, graphic and statistical methods. The information base consisted of the works by foreign and national economists.

3 Problem Solution

Studying the theoretical grounds as for the control over information and communication provision for the sustainable development of higher education institutions, it is first of all important to define what higher education institution's sustainable development means. Modern economics sees sustainable development as an irreversible process, however it also admits that its character, direction, tempos and other variables of economic development can change ambiguously under various factors. It is based on numerous researches on the essence of sustainable development, starting from the ideas of the academician V. I. Vernadskiy [5] and the first official mentioning of the 'sustainable development' term in the report of World Commission on Environment and Development in 1987 [6]. Thus, it was Gro Harlem Brundtland, the prime-minister of Norway, who first defined sustainable development that satisfies the needs of

nowadays but does not threaten the ability of future generations to satisfy their own needs [6, p. 626]. Similar interpretation is also suggested by other authors [7, 8]. Some researchers see sustainable development from the point of integration of economic, social and ecological components [7, 9, 10]. Most scientists understand 'sustainable development' as a process characterized by persistence and constancy of changes. At the same time, none of the approaches to define 'sustainable development' has become a commonly used one.

On the basis of definitions of 'sustainable development' term we can determine that sustainable development is a global mechanism providing effective economic activity of stakeholders in all spheres through effective use of resources and satisfaction of needs of all society members, through creating conditions for harmonious development of human potential, implementation of new scientific and technical knowledge with the awareness among the entire humanity of their responsibility towards the present and future generations and preservation of environment integrity.

In the study of 'sustainable development' term, one can outline the following essential elements that describe the term: the need to account for the interests of the present and future generations; account for the process of changes that is of dynamic character; harmonization and correlation of economic, ecological and social components of sustainable development; balance between the interests of all stakeholders in the provision of sustainable development; provision of qualitative growth in human potential; preservation of environment. Comparing the approaches of various researchers to the essence of 'sustainable development' term, one can assert the ambiguous nature of this term with its complex and dynamic nature.

The analysis of the definitions of 'sustainable development' term has shown that there is no generally accepted definition of this term as for higher education institutions. However, the study into sustainable development in higher education institutions in the modern conditions of global challenges is quite popular and is examined in the works of national and foreign scientists [2, 8, 11, 12, 13, 14].Considering the special functioning features of higher education institutions on the market of educational services in difficult conditions of competitive environment, the authors, in terms of this research, propose to define sustainable development in higher education institutions as a long-term group of processes of qualitative and quantitative changes in their activity that cause irreversible balanced improvement of their basic rating indexes and enhancement of adaptiveness in their confrontation with the negative influence coming from the environment as well as the inside factors.

Besides, when defining the essence of sustainable development in higher education institutions, one should account for the fact that its attainment is only possible on the condition of harmonious combination of three major subsystems of sustainable development - economic, social, and ecological ones. The schematic combination of the major components of sustainable development subsystems is presented in Fig.1.

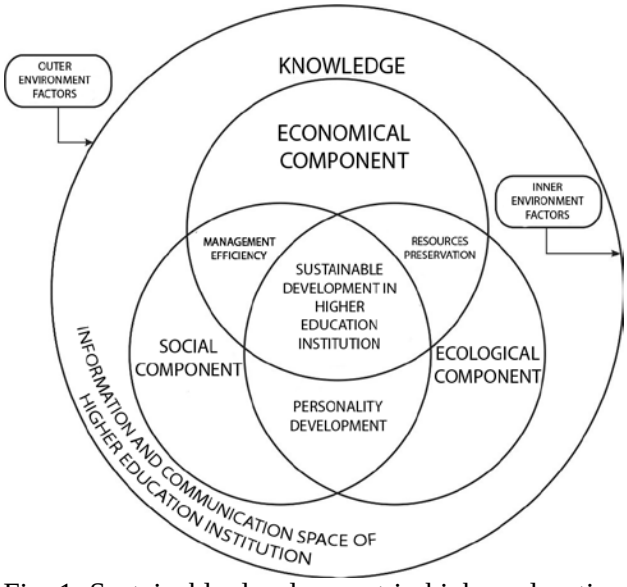

Fig. 1. Sustainable development in higher education institutions

Source: composed by the authors

The development of economic subsystem of higher education institution in the conditions of changeable environment shows its ability to sustain its competitive ability on the market of educational services; the ability to carry out its activities while maintaining the stable high level of profitability.

The social subsystem of sustainable development in higher education institutions is aimed at individuals and at the preservation of stability of social and

cultural systems - it is characterized by the ability to improve the conditions of social environment that will allow for decreasing the amount of devastating conflicts between people and enhancing the interest of all stakeholders in order to improve the results of higher education institution's activities [15]. The ecological subsystem of sustainable development in higher education institutions shows its ability to maintain the integrity of biological and physical natural systems as well as to preserve and multiply the potential at hand. The combination of the traditional subsystems of sustainable development will allow to preserve the resources of a higher education institution, promote the personal development of employees and students that are the human potential of a higher education institution, and will first of all promote the efficiency of management in the higher education institution and its activity in general. It also should be noted, that the activity of higher education institutions is carried out in the information and communication space under the influence of multiple factors of outer and inner environment which in its turn allows us to state that the most effective control over information and communication provision with the use of available resources will promote sustainable development in higher education institutions in the conditions of changeable environment. In the current conditions of management, control over information and communication provisions becomes one of the main functions of management. It is the information that is the basis of management, while modern communications assist its faster acquisition and exchange. All this promotes the importance of information and communication provision in achieving sustainable development in higher education institutions, thus we can state it is the efficient control over information and communication provision that will assist the achievement of sustainable development in higher education institutions and any other organizations in the conditions of ambiguity and changeability of environment.

In the study of sustainable development in higher education institutions it is important to note that its achievement is possible only with efficient use of available potential - namely the relevant resources [16]. Among the main resources used by higher education institutions in their activity, we should name information and the knowledge acquired on its basis. It is because information and knowledge are among the strategic resources that are the basis for a higher education institution to achieve certain competitive advantages in the process of its functioning on the market of educational services. That is why the influence of qualitative information on the achievement of strategical goals in higher education institutions is growing rapidly. It should however be noted that information without certain processing cannot be the basis for making managerial decisions [32]. Such information can be acquired through creating a system of information and communication provision and its efficient management. Studying the theoretical aspects of information and communication provision and its influence on the activity of higher education institutions and their sustainable development, we should note that although the term 'information and communication provision' can be often met in literature on economics, one can rarely meet its definition. One can come across the term 'information and communication technologies' (ICT) more often [3, 16]. Information and communication technologies are connected with the creation, preservation, communication, processing and control over information and are one of the most important factors and the most dynamic phenomenon of the modern world that influences the formation of 21st century society. The development of information and communication technologies is connected with the adoption of Okinawa Charter on Global Information Society [18] - one of the first international legal acts that attempts to emphasize the basic principles and ways of forming and developing informational society - it was adopted by the leaders of the seven world's most developed countries in Okinawa on July 22nd, 2000. According to the provisions of the Charter, the basis of economic and social transformation stimulated by the information and communication technologies lies in its ability to assist people and society in implementation of knowledge and ideas. The informational society, as understood by the authors of the Charter, gives people an opportunity to use their potential and implement their aspirations [19, p. 5].

The dynamic market environment enables constant update and growth in the volume of data and information that becomes of special significance for the achievement of sustainable development in

higher education institutions. It is the efficiency of control over information and communication provision that determines the development and adoption of effective managerial decisions in order to achieve sustainable development in higher education institutions.

Control over information and communication provision is first of all work with data, the result of which is acquisition/accumulation of information, necessary to form knowledge, and the effective use of that knowledge in the activity of higher education institutions will allow for taking well-grounded managerial decisions, aimed at the provision of sustainable development in higher education institutions.

To manage information and communication provision of sustainable development in higher education institutions effectively, it is first of all required to account for the relevant factors that have direct influence on the efficiency of the activity. These factors make the specificity of higher education institutions' activity on the market of educational services and define the special character of management in higher education institutions that are much more complex than in any other sphere of economy. We emphasize that sustainable development in higher education institutions implies balanced improvements of it main rating indexes and enhancement of adaptive characteristics to resist the negative influence of outer and inner environment, that is why, while defining the factors that have direct influence on the efficiency of control over information and communication provision for sustainable development in higher education institutions, one should take into account the parameters of assessment of higher education institutions' activity. As for today, the estimation of efficiency of higher education institutions is based on rating system that is carried out by many Ukrainian and foreign organizations. The estimation is based on the assessment of inner and outer parameters of their activity with the use of scientifically proved methodology of assessment. In the course of last years, in Ukraine and in the world, it was the ratings of higher education institutions that were one of the basic and most available tools for the assessment of their efficiency for outer consumers [20].

The most popular ratings of higher education institutions activity today can be considered the following:

- Times Higher Education World University Rankings [21];
- ShanghaiRanking Academic Ranking of World Universities [22];
- QS World University Rankings [23];
- QS EECA University Rankings [24];
- CWUR World University Rankings [25];
- Webometrics ranking of world's universities (Webometrics) [26].

Let us look in more detail into the available methodologies of rating assessment of higher education institutions activity as offered by the leading world organizations.

The Times Higher Education World University Rankings is a global research accompanied by the rating of the best higher education institutions of global significance [21]. It was calculated with the help of Times Higher Education (THE) methodology with the participation of Thomson Reuters information group. This rating is one of the most influential global ratings of universities. It was developed in 2010 by Times Higher Education in cooperation with Thomson Reuters in terms of Global Institutional Profiles Project and was the successor of the popular World University Rankings, issued by Times Higher Education in collaboration with Quacquarelli Symonds company. In its turn, since 2010, Quacquarelli Symonds has been issuing the rating of world's best universities under the name of QS World University Rankings that is also considered to be one of the most prominent in this field. According to the methodology of THE World University Rankings, the level of accomplishments of HEI (higher education institutions) is assessed on the grounds of their results in the combination of statistical analysis of their activities, audited data, as well as of the results of annual expert polling of the representatives of international academic community and employers that express their thoughts about a higher education institution. The polls cover tens of thousands of scientists from most countries of the world. At the same time, the criteria for picking experts are the scientometric analysis of productivity and quoting, as well as teaching and scientific activity in higher education institutions for

more than 16 years, and at least 50 published scientific works plus other criteria. In the course of assessment, the experts choose from six thousands of institutions only the higher education institutions that they consider to be the best ones as well as the universities for postgraduate education on master's and doctor's levels. The data of the global poll makes the basis of the sub-rating of universities' scientific reputation (THE World Reputation Rankings) that is published as a separate issue in terms of the project [21]. Aside from the rating of world's best universities, THE World Reputation Rankings presents the ratings of the universities in the USA, Europe and Japan, as well as ratings based on specific spheres. According to the data from 2017-2018, none of Ukrainian institutions was included into the rating of world's best universities according to Times Higher Education / THE World University Rankings [21]. The Academic Ranking of World Universities (ARWU), more widely known as Shanghai Ranking shows the scientific and academic activity of universities. The research includes more than 1200 HEI, and only 500 of them are included to the list of world's best universities [22]. ARWU is based on six indexes, among them are: the number of graduates and university employees; the number of Nobel prize [27], or Fields Medal [28], or Turing Award [29] winners; the number of often quoted researchers [30], the number of articles published in Nature and Science magazines within the last 10 years. Aside from that, it includes the biggest institutions of all countries that have a considerable number of articles, indexed in Science Citation Index-Expanded (SCIE) and Social Science Citation citation Index (SSCI) [31].

The ARWU rankings annually includes more than 1200 universities, and the best 500 are published [22]. This ranking is considered to be one of the most respected, influential and widespread in the world. One of the reasons of such popularity of Shanghai ranking ARWU is the fact that its methodology has scientific grounds, and is stable and clear.

With the goal to more fully satisfy the various needs for global comparison of universities, aside from ARWU, CWCU (Center for World-Class Universities) has developed the Academic Ranking of World Universities by Broad Subject Fields (ARWU-FIELD) in 2007 and the Academic Ranking of World Universities by Subject (ARWU-SUBJECT) in 2009. The high criteria for universities to be included into Shanghai ratings have not allowed any of Ukrainian higher education institutions to take their place in those rankings. QS World University Rankings is a global research and an accompanying ranking of the best universities of world significance by their achievements in the field of education and science according to the British consulting company Quacquarelli Symonds (QS) [23]. This rating is one of the most influential global ratings of universities. QS World University Rankings assesses universities by the following indexes: activity and quality of scientific researches, the opinion of employers and career potential, teaching and internationalization. These indexes cover the key strategic missions of the universities of global significance, and those universities are held accountable for them to the participants of the process: the academic community, employers, students and their parents. Annually, the research assesses more than 2.5 thousand higher education institutions all over the world. Based on its results, there is a ranking of 500 world best universities composed as well as ranking of universities in specific fields [23]. The level of achievements of universities is assessed according to the results of the combination of statistical analysis of higher education institutions activity, the audited data (including the information on the Scopus citation index, the biggest bibliometric database of scientific works), as well as the data of global expert poll of the representatives of international academic community and employers who express their opinion about the universities. The special feature of this ranking is an opportunity to study the activity of universities by countries and the fields in which they train their students and postgraduates. According to QS World University Rankings 2019, the ranking includes 33 Ukrainian higher education institutions. At the same time, none of Ukrainian higher education institutions was included into the top 500. Among the 4758 universities presented in the ranking, only 6 Ukrainian higher education institutions were included in top 1000 (Table 1) [23]. As one can see in the data presented in Table 1, the position of Ukrainian higher education institutions in QS World University Rankings has improved within the last years. The position of Taras Shevchenko Kyiv National University and Sumy State University has become higher in the ranking. The appearance of Lviv Polytechnic

National University in the rankings also shows the growth in its efficiency in the world market of educational services.

Table 1. Ukrainian higher education institutions in QS World University Rankings

Higher education institution	Years						Tendency
	2014	2015	2016	2017	2018	2019	
V. N. Karazin Kharkiv National University	-	# 481-490	# 491-500	# = 382	# 401-410	# = 481	↑
Taras Shevchenko Kyiv National University	# 441-450	# 421-430	# 421-430	# 431-440	# 411-420	# 531-540	↑
National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	# 601-650	# 551-600	# 601-650	# 551-600	# 501-550	# 601-650	–
National Technical University "Kharkiv Polytechnic Institute"	# 701 +	# 701 +	# 701 +	# 701 +	# 701-750	# 701-750	–
Lviv Polytechnic National University	-	-	-	-	-	# 751-800	↑
Sumy State University	-	# 651-700	# 701 +	# 701 +	# 801-100	# 751-800	↑
Vasyl' Stus Donetsk National University	-	-	# 701 +	# 701 +	# 801-1000	-	–

Source: Composed by the authors on the basis of [23].

We should also mention that aside from the general rankings of world best universities, Quacquarelli Symonds also offers other rankings, namely the ratings of the best universities by regions and subjects.

Ukrainian higher education institutions, according to their geographical position, take their places in QS EECA University Rankings that has been studying the efficiency of universities in a certain region since 2014, namely in European countries with transitional economy and Central Asia [24]. QS EECA University Rankings shows the activity of 300 best universities in European countries with forming market and Central Asia, using the methodology, adapted from the general rating of universities QS World University, and similar to the one used for other QS regional rankings. The position of Ukrainian higher education institutions in QS EECA University Rankings is presented in Table 2. As one can see in the data presented in Table 2, the position of three Ukrainian higher education institutions in QS EECA University Rankings has improved, namely of National Technical University "Kharkiv Polytechnic Institute", Sumy State University, and Vasyl' Stus Donetsk National University. The indexes of other higher education institutions presented in the rankings have a tendency to decrease or do not change. Another one of the most widespread university ratings is CWUR World University Rankings. The methodology of calculations for CWUR is based on a quantitative approach - seven well-grounded and secure indexes of universities efficiency that make it possible to compose the rating of 1000 world best universities among 18000 presented. The main indexes of CWUR rankings include: quality of education, graduates' employment; the quality of scientific and teaching staff (faculty), results of researches, quality of publications, level of influence, citation index [25]. Aside from the general rankings, CWUR presents rankings by country and subjects. None of Ukrainian higher education institutions is included into CWUR rankings.Table 2. The position of Ukrainian higher education institutions in QS EECA University Rankings

Higher education institution	Years			Tendency
	2016	2017	2018	
V. N. Karazin Kharkiv National University	# 55	# 56	# 53	↓
Taras Shevchenko Kyiv National University	# 39	# 38	# 34	↓
National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”	# 48	# 48	# 49	↑
National Technical University "Kharkiv Polytechnic Institute"	# 93	# 97	# 93	–
Lviv Polytechnic National University	# = 96	# 101-110	# 101	–
Sumy State University	# 89	# 98	# 103	↑
Vasyl' Stus Donetsk National University	# = 98	# 101-110	# 161-170	↑

Source: Composed by the authors on the basis of [24].

Apart from the classical rankings of world best universities, another rating that has become famous in the recent years is Webometrics ranking of world’s universities - it is one of the most widespread and established rankings that define the position of universities among 20000 higher education institutions according to the degree of its presence in the web [26]. The main advantage of Webometrics ranking is the comfortable and clear way of showing the results of rating, however it should be admitted that Webometrics has its disadvantages, namely there are mistakes characteristic to automatized algorithms of web-analysis - the mistakes in the precise number of links to universities' domains. However, according to the results of this ranking, all the world's leading universities are at the head of it which proves its adequacy and eligibility. Besides, the methodology of Webometrics ranking [26] is constantly improved according to the new conditions of Internet development. The activity of Ukrainian higher education institutions is most widely presented in Webometrics ranking. According to the data of 2018, the ranking includes 326 higher education institutions of Ukraine. Among the 2000 best universities, the activity of which is effectively presented in the internet, there are four Ukrainian higher education institutions, namely Taras Shevchenko Kyiv National University, National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”, Lviv Polytechnic National University, and Sumy State University. On the basis of the research into the methodology of rating assessment of world best universities efficiency based on the results of the most respected and widespread world rankings, we can single out the main indexes that influence the results of higher education institutions (Table 3). Each of the analyzed ratings of universities' efficiency has its specific features, advantages and disadvantages. Thus, the ARWU Shanghai Ranking is considered to be one of the most established rankings, although its rating is more concentrated on the bibliometric indexes, i. e. it takes into consideration the number of scientists that possess distinguished awards in various fields, namely the Nobel Prize, Fields Medal and others - won by the university staff in the period of their work at the university. However, not all scientists that have won the most distinguished awards got their higher education at the universities where they carried out their scientific researches that actually won them those prizes. ARWU Ranking does not use the reputation polls like THE World University Rankings, QS World University Rankings and CWUR World University Rankings do, because in the case of reputation questionings, there is always a chance of subjectivity, and this kind of results is hard to check. As for the Webometrics - although Ukrainian higher education institutions are much presented in it, it does account only for web presence which cannot be an objective index of quality of education and higher education institution's activity. It should also be noted that world ratings mostly assess the general activity of universities and almost never assess the activity of universities by subject fields. Only the Academic Ranking of World Universities (ARWU) assess the activity by subjects (ARWU-SUBJECT) and by subject fields (ARWU-FIELD), as well as QS World University Rankings by Subject. Despite the special features and certain disadvantages in the methodology of assessment of world universities,

Table 3. Summary of the Basic Indexes of Rating Assessment for World Best Universities

Indexes	THE World University Rankings	Academic Ranking of World Universities	QS WORLD UNIVERSITY RANKINGS	QS EECA	CWUR World University Rankings	Webometrics
University's academic reputation, including scientific activity and education quality	+	+	+	+	+	
University's reputation among employers			+	+	+	
Scientific reputation in certain fields	+	+				
Quality of scientific and teaching staff (number of awards)		+			+	
Citation index for the works of the teaching staff	+	+	+	+	+	+
Quality of publications measured by the number of scientific works published in highly-influential magazines	+				+	+
Amount of financing for the scientific work of the university	+					
Correlation between the teaching staff and the total number of students	+		+	+		
Share of foreign teachers	+		+	+		
Share of foreign students	+		+	+		
Correlation between the number of theses defended and the number of teachers	+			+		
Presence in the network				+		+

Source: Composed by the authors on the basis of [21, 22, 23, 24, 25, 26]

one can single out certain factors that influence the indexes of efficiency of higher education institutions. Thus, based on the analysis of world best universities rating criteria we can note that the efficiency of higher education institutions in the world and in Ukraine specifically is influenced by certain factors of inner and outer environment that in their turn influence the prevision of sustainable development in higher education institutions. Among the major factors on which depends the efficiency of higher education institutions one can single out the following: -competitive advantages of a higher education institution in the market of educational services that have formed within the year of its existence; - business reputation of a higher education institution, its staff and graduates; - the management style in the higher education institution; - professional quality of teaching staff and employees of a higher education institution; - type of a higher education institution and its accreditation level; -the volume and sources of funding for scientific and teaching activity; -types and volumes of educational services provided; - risks connected with the ambiguity conditions in which a higher education institution functions. There is a certain information and communication interrelation between the stated factors that influence the provision of sustainable development in higher education institutions (Fig.2).

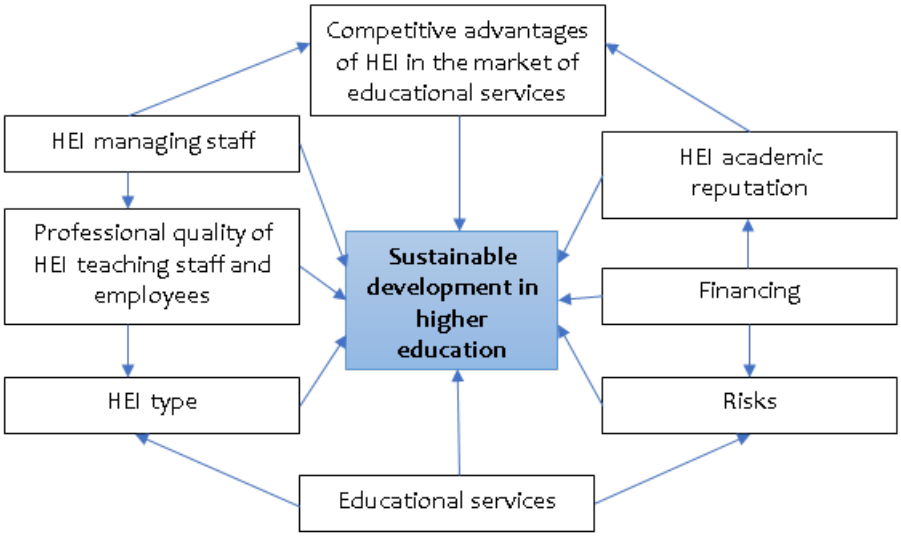

Fig. 2. Interrelation between the factors that influence management efficiency of information and communication provision of sustainable development in higher education institutions

Source: composed by the authors

Investigating the factors that influence the efficiency of control over information and communication provision of sustainable development in higher education institutions, we should point out that in the modern conditions of management it is the information and the knowledge based on it that are the unique resource which allows for sustainable development in higher education institutions as a specific social and economical educational system. One of the most important missions of information is clearing and reducing ambiguity which as a result promotes achievement of sustainable development. In order to achieve this, one needs to possess full, trustworthy, well-timed, and relevant information, acquired on the basis of relevant data.

4 Conclusion

Despite the category 'sustainable development' being popular in scientific studies dedicated to economic activity of higher education institutions, there are still disagreements as for the interpretation of its essence; the main characteristics of sustainable development in higher education institutions have not been clearly defined; the existent methodologies and systems of rating assessment of higher education institutions are mainly well-grounded only on the national level and do not take into account the functioning of higher education institutions as complex social and economical systems as well as subjects of economic management in the market of educational services; the conditions and models of efficient use of resources in higher education institutions have not been sufficiently covered; the issue of control over information and communication provision of sustainable development in higher education institutions requires much attention. Such discussions and uncertainties complicate the process of achievement of sustainable development due to scientifically well-grounded control over information and communication provision of higher education institutions and determines the need in further studies in this direction. On the basis of work with scientific sources and their own applied research, the authors reviewed and defined the theoretical base of management of sustainable development in higher education institutions, namely they defined the term 'sustainable development in higher education institution' that is a long-term combination of processes of qualitative and quantitative changes in its activity that provides irreversible balanced improvement of its main rating indexes and the enhancement of adaptivity in its confrontation with the negative influence of outer environment as well as inner factors in terms of effective use of the potential at hand due to efficient control over information and communication provision, using the data, information, knowledge, and communication as its main resources that promote achievement of sustainable development in higher education institution. The results of the

theoretical study carried out as well as of the analysis of conditions and functioning efficiency of Ukrainian higher education institutions by specific subject fields and of foreign experience show the need of developing the conceptual basis of control over information and communication provision of sustainable development in higher education institutions. The scientific novelty of the results acquired lies in the theoretical substantiation of the term 'sustainable development in higher education institution' and in defining the factors of effective control over information and communication provision of sustainable development in higher education institutions on the basis of methodology analysis of rating assessment of the world best higher education institutions. The practical use of the results acquired is the possibility to define the factors that influence management efficiency of information and communication provision of sustainable development in higher education institutions. The perspective of further studies is development of a concept of control over information and communication provision of sustainable development in higher education institutions on the basis of knowledge economy.

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