Non-Governmental Universities Role in Scientific Development of Iran

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ABSTRACT

The development of a country depends on the creation of a scientific idea and provides high quality education systems, and Academic development is the oil that turns a country's development wheel. This study was aimed at exploring the relationship between Non-Governmental Universities roles and Scientific Development in 2Th region of Non-Governmental Universities. The nature of the study is co-relational. Population of the study is all managers of Non-Governmental Universities in 2Th region. We determined the amount of the sample size with the used of p.q sampling method, which the statistical sample is 56 of these managers which have been selected through the simple random sampling method. To gathering of data, we used a questionnaire that its stability was 91% according to Cronbach alpha. Questionnaire was made on 5 point Likert scale to verify the impact of variables. To analyze the data resulted from collected questionnaires deductive and descriptive statistical methods are used, and to display some statistical data we used column diagram and in deductive level to test the hypothesis of the research we used Pierson correlation test (r) and to determine the meaningfulness level of (r) we used t-test. Findings show that there is relationship between NGU role and Scientific Development.

Keywords: Educational System, Educational Structure, Educational Costs, Educational Products, Research Activity, Scientific Development

1 INTRODUCTION

Iran has a large network of private, public, and state affiliated universities offering degrees in higher education. State-run universities of Iran are under the direct supervision of Iran's Ministry of Science, Research and Technology (for non-medical universities) and Ministry of Health and Medical Education (for medical schools). In 2008, Iran had over 3.5 million students enrolled in universities. Some 1.7 million study in various programs in Non-Governmental Universities and the remainder in State universities. In addition the new enrollment numbers for the academic year 2010 were 345 thousand in Azad universities, and 320 thousand in State universities [1].

Non-Governmental Universities is a private chain of universities in Iran such as Islamic Azad University and University of Applied Science and Technology. Azad University Headquartered in Tehran, Iran, the Islamic Azad Universities was founded in 1982 and currently has an enrollment of 1.5 million students, [2] making it the world's third largest. Azad University has over 400 branches across the country and also in other countries. It has branches and universities in U.A.E, United Kingdom, Tanzania, Lebanon and Armenia. Islamic Azad Universities has started to launching universities and branches in Malaysia, Canada, Afghanistan and Tajikistan. These will open in a near future. Over the years, the university has accumulated assets estimated to be worth between $20 and $25 billion. Islamic Azad University's activities quickly expanded throughout the country, so that today thousands of students are benefiting from its high educational standards. Not relying on government funding, it receives charitable donations and charges students with tuition fees. The certificates issued by this university are recognized by the

Ministry of Science and Higher Education. Master and doctorate programs have been offered in many different branches of Islamic Azad Universities [3].

University of Applied Science and Technology (UAST) (Dāneshgah-e Jām'e elmi kārbordi) is an university administrated by Ministry of Science with various branches all over the Province of Iran University helps to increase skill level of employed persons in various sectors of economic field and Graduates of higher education and professional skills that are lacking in administrative.

Academic development is centered on the educational accomplishment of a given country. Academic development is the oil that turns a country's development wheel. The rate at which a country can grasp new ideas, technological infusion and quickly embrace borrowed technology depends on its level of academic development. The major measure of educational accomplishment of a country is the presence of a university, which not only produces graduated labor force but also serves as the torch for the lower rungs of academic ladder. In other words the success of a person is viewed in terms of his educational accomplishments. Strictly speaking in a fair society the educated enjoy good jobs and fat salaries as the uneducated either become their juniors or their servants [4]. Generally, the university system is woven around three comprehensive activities: instruction for undergraduate, graduate, and professional degrees; research geared to expanding the frontiers of knowledge; and outreach or dissemination of learning beyond the boundaries of the institution through the printed word, scholarly associations, formal and non-formal instruction, and worldwide telecommunications and computer linkages [5].

The development of a country depends on the creation of a scientific idea and provides high quality education systems. So, in this study we have tried to investigate Iran's NGU universities roles in achieve Scientific Development and reply to this question "Is there relationship between NGU universities role and scientific development."?

2 REVIEW OF LITERATURE

All general theories claim to identify patterns in the development of science, but they differ as to whether the significant patterns are found in the temporal logical structure of the products of science or in its historical process of development, and in whether development equates with progress toward the truth. They also differ in how to explain the patterns and the apparent progress of science.

In the twentieth century, both philosophy of science and history of science became professional disciplines. The logical positivists—Moritz Schlick, Rudolf Carnap, Otto Neurath, Hans Reichenbach, Carl Gustav Hempel, and others—inspired by the new symbolic logic and the radical empiricism they found in David Hume and Ernst Mach, developed a strongly empiricist, "verifiability theory" of meaning and justification in order to banish metaphysics and to secure a true scientific enlightenment. They aimed to articulate the non-historical logical structure of theories, confirmation, explanation, and so on, and they sharply distinguished logic, method, and philosophical analysis from empirical claims. For them, science progresses in a cumulative manner; facts and low-level laws are the primary carriers of knowledge. As positivism mellowed into logical empiricism, theories and theoretical explanation gained in importance [6].

The turn to historical models of development owed much to the maturation of internalize history of science. In turn, the emergence of social history and sociology of science brought new, more externalist, and local models of scientific development such as the "interest" theory of the Edinburgh Strong Program in sociology of knowledge and the actor-network theory of Bruno Latour and Michel Callon. Derek J. De Solla Price had demonstrated the exponential growth of science until the 1970s and thereby encouraged the formulation of economic and policy-oriented models of science. Today we emphasize the great cultural and topical diversity of scientific work and no longer make physics the model for all science. In short, the day of the big systems has seemingly passed. Gone also are the sharp distinctions between pure science and technology and between empirical content and methods or techniques[7].

Meanwhile, scientists themselves have proposed interesting models of scientific development. Most of the older models are vaguely positivist. More recently, physicist Steven Weinberg defends the strongly "Copernican" view that physics is moving toward a final, highly reductive, aesthetically pleasing, unitary Theory of Everything, where no internal changes will be possible without inconsistency. Gerald Holton

offers a more historical model of scientific change, according to which the scientific work of an age or a generation is shaped by salient members of a set of “themata”: conceptual and methodological resources that are imaginative and metaphysical, because untestable, rather than either empirical or analytical. Themata typically come in thema-antithema pairs, like continuous versus discrete, causal-mechanistic versus nonmechanistic, teleological versus non-teleological. Holton holds that there exist only a few dozen basic themata, most inherited from the ancient Greeks. Niels Bohr's complementarily amounts to a new thema that combines a former, seemingly contradictory pair. Several of these themata manifest themselves in models of scientific change, for example the search for unitary theory versus an anti-reductive emphasis on diversity [8].

Before former General Secretary Jiang Zemin left office, the ideological contribution of the "third generation of leadership" was entrenched in the party and state constitutions in 2000 under the name Three Represents. This seemingly novel ideology was in reality a more capitalist deviation to Deng Xiaoping's original Socialism with Chinese characteristics, and served more as official rhetoric than in practical usage. In addition, its poorly defined limitations as well as the timing of its inception seem to point to it being a legacy project for Jiang. After his departure from an official role, Jiang Zemin continued to wield significant influence in the country's affairs. Due to popular pressure and increased inner party struggles, Jiang was forced to give up the power that remained through a gradual process lasting from 2003 to 2005.

In 2005 it was speculated that the new leader, Hu Jintao, had gained firm control of the state, party, and military. One of his main goals in his early administration was to fill the ideological vacuum left by China's leadership since Deng's economic growth-oriented policies cemented in Chinese society and began to backfire. While creating a new "middle class" as well as upper layers, the sheer size of the population and the starting conditions have necessarily meant that the bulk of the population has remained closer to those original conditions, a situation considered undesirable and unstable by the national leadership (whence the Harmonious Society policy). The idea was to thrash out an approach to the country’s increasingly serious social problems and general instability. In addition, the unstated focus on GDP growth by local governments was beginning to detract from overall societal development, also leading to false figures and various Face projects aimed solely at growing the monetary measure of output. The conclusion was the need for a new ideological campaign to shift the focus of the official agenda from "economic growth" to "social harmony". The idea, although not in the exact terms by which it would later become known, was first embraced by the Third Plenary Session of the 16th Central Committee, which convened in Beijing on October 11 to 14, 2003 [1]. Guangdong Party Secretary Zhang Dejiang openly embraced the idea at a provincial party session in Guangdong.

General Secretary Hu Jintao subsequently launched the campaign in full form with a speech to the National People's Congress calling for the building of "a harmonious society". He summed up his conception as the development of "democracy, the rule of law, justice, sincerity, amity and vitality" as well as a better relationship between the people and the government and "between man and nature", meaning environmental harmony. It is also likely that the idea was also an attempt at solidifying Hu Jintao's status of a paramount position in China, as all other leaders before him had an ideology associated with them, namely, Mao Zedong Thought, Deng Xiaoping Theory, and Jiang's Three Represents. However, the fact that the concept was implemented during Hu's time in office, whereas all other ideologies were implemented after each leader's respective term had ended, seems to point that Hu wanted to assert his political stature rather urgently primarily to drown out growing dissent of Three Represents and signify Jiang's dwindling position of power. The ideology also states to be a lot more democratic and rights-based in its tone. Whereas Maoism was political in nature, and Dengism was economic, Scientific Development is social in its focus. The concept reflects a trend within the Communist Party of China under the Hu-Wen Administration to subscribe to more populist policies and guidelines (Fewsmith, 2004).

3 RESEARCH OBJECTIVES

The Main objective of this study is understand and determining relationship between NGU roles and scientific development. According to Main objective, the Secondary objectives are:

1- Understanding and determining relationship between educational system of NGU and Scientific Development.

2- Understanding and determining relationship between educational structure of NGU and Scientific Development.

3- Understanding and determining relationship between educational costs of NGU and Scientific Development.

4- Understanding and determining relationship between educational products of NGU and Scientific Development.

5- Understanding and determining relationship between research activity of NGU and Scientific Development.

4 METHODOLOGY

This study was aimed at exploring the relationship between Non-Governmental Universities roles and Scientific Development in 2Th region of Non-Governmental Universities. The nature of the study is co-relational. Population of the study is all managers of Non-Governmental Universities in 2Th region. We determined the amount of the sample size with the used of p.q sampling method [9], which the statistical sample is 56 of these managers which have been selected through the simple random sampling method. To gathering of data, we used a questionnaire that its stability was 91% according to Cronbach alpha. Questionnaire was made on 5 point Likert scale [10] to verify the impact of variables.

In order to analyze the data resulted from collected questionnaires deductive and descriptive statistical methods are used, and to display some statistical data we used column diagram and in deductive level to test the hypothesis of the research we used Pierson correlation test (r) and to determine the meaningfulness level of (r) we used t-test.

In this paper have one main hypothesis and nine secondary hypotheses. The statistical way of analysis of hypotheses is two ways [11], H_1 is acceptance of hypothesis and H_0 is rejecting of hypothesis. In other words, it means that H_1 has positive meaning and H_0 has negative meaning.

5 ANALYSIS

5.1 Descriptive Analysis

Table1 shows Std. Error of Mean, Median, mode, Std. Deviation, Variance, Maximum, Range, minimum and sum of all variables.

Table1- Std. Error of Mean, Median, Std. Deviation and …

Statistics							
		Scientific Development	educational system	educational structure	educational costs	educational products	research activity
N	Valid	56	56	56	56	56	56
	Missing	0	0	0	0	0	0
Std. Error of Mean		.894	.323	.215	.231	.268	.274
Median		45.00	12.00	11.00	12.00	11.00	11.00
Mode		37[a]	13	11	11	11	11
Std. Deviation		5.488	2.060	1.351	1.402	1.498	1.586
Variance		31.039	3.986	1.618	1.825	2.395	2.651
Range		19	8	6	5	5	7
Minimum		35	10	10	11	9	9

Maximum	56	15	15	15	15	15
Sum	1521	435	392	412	375	431
a. Multiple modes exist. The smallest value is shown						

Table2 shows responders degree. According to table2, 53.57 percent of the responders have M.A degree and 46.43 percent have PH.D degree.

Table2- Responders degree

Responders degree					
Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	PHD	26	46.43	46.43	46.43
	MA	30	53.57	53.57	100.0
	Total	56	100.0	100.0	

Table3 shows Managing background of the responders. According to table3, from the precedence point of view about 8.93 percent of responders have less than 2 years. 23.21 percent 3-5 years, 28.57 percent 6-9 years, 25 percent 10-13 years experience in managing and finally 14.29 percent have more than 14 years of managing experience which is shown in table3.

Table 3- Managing background of the responders

Managing background of the responders					
Valid		Frequency	Percent	Valid Percent	Cumulative Percent
	Less than 2	5	8.93	8.93	8.93
	3-5	13	23.21	23.21	32.14
	6-9	16	28.57	28.57	60.71
	10-13	14	25	25	85.71
	More than 14	8	14.29	14.29	100.0
	Total	56	100.0	100.0	

5.2 Data Analysis

The results obtained from survey and testing the research hypothesis have come below.

H1. There is relationship between educational system of NGU and Scientific Development.

This hypothesis is measured by 3 questions of educational system of NGU and 12 questions of relating to scientific development. As shown in table 4, correlation coefficient between grades of educational system and scientific development is positive and significant (r=0.379, P=0). Therefore, first secondary hypothesis is confirmed. According to obtained t (2.37) from testing the main hypothesis which is bigger than the critical point of t-table in fault ability level α=0/05, so with reliability level of 95 percent we can be said the main hypothesis is approved, and we can say that educational system of NGU in 2Th region is affecting in scientific development of Iran. In other words, there is a meaningful relationship between educational system of NGU and scientific development and we can reject the H_0. According to obtained determination quotient, educational system of NGU variable explains 14.44 percent of dependent variable variance of scientific development in Iran. This means that 14.44 percent of variation in scientific development in Iran is dependent upon independent variable.

Table 4 - Pearson's correlation coefficients of educational system of NGU and Scientific Development

Correlations			
		educational system	Scientific Development

educational system	Pearson Correlation	1	0.379
	Sig. (2-tailed)		.000
	N	56	56

H2. There is relationship between educational structure of universities and Scientific Development.

This hypothesis is measured by 3 questions of educational structure of NGU and 12 questions of relating to scientific development. As shown in table 5, correlation coefficient between grades of educational structure and scientific development is positive and significant (r=0.467, P=0). Therefore, second secondary hypothesis is confirmed. According to obtained t (2.99) from testing the main hypothesis which is bigger than the critical point of t-table in fault ability level α=0/05, so with reliability level of 95 percent we can be said the main hypothesis is approved, and we can say that educational structure of NGU in 2Th region is affecting in scientific development of Iran. In other words, there is a meaningful relationship between educational structure of NGU and scientific development and we can reject the H_0. According to obtained determination quotient, educational structure of NGU variable explains 21.80 percent of dependent variable variance of scientific development in Iran. This means that 21.80 percent of variation in scientific development in Iran is dependent upon independent variable.

Table 5- Pearson's correlation coefficients of educational structure of NGU and Scientific Development.

Correlations			
		educational structure	Scientific Development
educational structure	Pearson Correlation	1	0.467
	Sig. (2-tailed)		.000
	N	56	56

H3. There is relationship between educational costs of universities and Iran' 20-Year Vision Plan.

This hypothesis is measured by 3 questions of educational Costs of NGU and 12 questions of relating to scientific development. As shown in table 6, correlation coefficient between grades of educational Costs and scientific development is positive and significant (r=0.369, P=0). Therefore, third secondary hypothesis is confirmed. According to obtained t (2.14) from testing the main hypothesis which is bigger than the critical point of t-table in fault ability level α=0/05, so with reliability level of 95 percent we can be said the main hypothesis is approved, and we can say that educational Costs of NGU in 2Th region is affecting in scientific development of Iran. In other words, there is a meaningful relationship between educational Costs of NGU and scientific development and we can reject the H_0. According to obtained determination quotient, educational Costs of NGU variable explains 13.61 percent of dependent variable variance of scientific development in Iran. This means that 13.61 percent of variation in scientific development in Iran is dependent upon independent variable.

Table 6- Pearson's correlation coefficients of educational costs of NGU and Scientific Development.

Correlations			
		educational costs	Scientific Development
educational costs	Pearson Correlation	1	0.369
	Sig. (2-tailed)		.001
	N	56	56

H4. There is relationship between educational products of universities and Scientific Development.

This hypothesis is measured by 3 questions of educational products of NGU and 12 questions of relating to scientific development. As shown in table 7, correlation coefficient between grades of educational products and scientific development is positive and significant (r=0.571, P=0). Therefore, forth secondary hypothesis is confirmed. According to obtained t (3.94) from testing the main hypothesis which is bigger than the critical point of t-table in fault ability level α=0/05, so with reliability level of 95 percent we can be said the main hypothesis is approved, and we can say that educational products of NGU in 2Th region is affecting in scientific development of Iran. In other words, there is a meaningful relationship between educational products of NGU and scientific development and we can reject the H_0. According to obtained determination quotient, educational products of NGU variable explain 32.60 percent of dependent variable variance of scientific development in Iran. This means that 32.60 percent of variation in scientific development in Iran is dependent upon independent variable.

Table 7- Pearson's correlation coefficients of educational products of NGU and Scientific Development.

Correlations			
		educational products	Scientific Development
educational products	Pearson Correlation	1	0.571
	Sig. (2-tailed)		.000
	N	56	56

H5.There is relationship between research activity of universities and Scientific Development.

This hypothesis is measured by 3 questions of educational activities of NGU and 12 questions of relating to scientific development. As shown in table 8, correlation coefficient between grades of educational activities and scientific development is positive and significant (r=0.628, P=0). Therefore, fifth secondary hypothesis is confirmed. According to obtained t (4.57) from testing the main hypothesis which is bigger than the critical point of t-table in fault ability level α=0/05, so with reliability level of 95 percent we can be said the main hypothesis is approved, and we can say that educational activities of NGU in 2Th region is affecting in scientific development of Iran. In other words, there is a meaningful relationship between educational activities of NGU and scientific development and we can reject the H_0. According to obtained determination quotient, educational activities of NGU variable explain 39.44 percent of dependent variable variance of scientific development in Iran. This means that 39.44 percent of variation in scientific development in Iran is dependent upon independent variable.

Table 8- Pearson's correlation coefficients of research activities of NGU and Scientific Development.

Correlations			
		research activity	Scientific Development
research activity	Pearson Correlation	1	0.628
	Sig. (2-tailed)		.000
	N	56	56

MH. There is relationship between university roles *and Scientific Development.*

This hypothesis is measured by 15 questions of NGU role and 12 questions of relating to scientific development. As shown in table 9, correlation coefficient between grades of NGU role and scientific development is positive and significant (r=0.752, P=0). Therefore, Man hypothesis is confirmed. According to obtained t (6.45) from testing the main hypothesis which is bigger than the critical point of t-table in fault ability level α=0/05, so with reliability level of 95 percent we can be said the main hypothesis is approved, and we can say that NGU role in 2Th region is affecting in scientific development of Iran. In other words, there is a meaningful relationship between NGU role and scientific development and we can

reject the H_0. According to obtained determination quotient NGU role variable explain 56.55 percent of dependent variable variance of scientific development in Iran. This means that 56.55 percent of variation in scientific development in Iran is dependent upon independent variable.

Table 9- Pearson's correlation coefficients of NGU Role and Scientific Development.

Correlations			
		research activity	Scientific Development
research activity	Pearson Correlation	1	0.752
	Sig. (2-tailed)		.001
	N	56	56

6 CONCLUSION & SUGGESTIONS

Findings show that there is relationship between NGU role and Scientific Development. According these findings, we must take cognizance of the fact the development of our country greatly depends on those among us who work in the area of education. Nowhere in the world has sustained development been achieved without a well functioning system of education, and without superb universities from whose research laboratories numerous, inventions have gone a long way to improve the quality of life and to provide the much needed labor force. If we want to build entrepreneurs in Iran, we must at the same time build the intelligentsia. The educational system of a country is the base upon which the country's development lies. Properly trained manpower is the oil that will turn the country development wheel.

It seems, despite being under sanction for about 30 years, this plan will enable Iran to sustain its scientific progress, making it a good model for developing countries to follow as it demonstrates self-reliance on a domestic pool of talents and technological know-how.

- The university should impart on its graduates the various skills that will enable them to join the labor force without hassles.
- The university should have academic freedom so that the frontiers of knowledge are probed and explored. University students should be encouraged to develop new ideas and participate in active discussions of challenging ideas with fellow students. Lecturers should act as the catalysts to these challenging ideas.
- The university lecturers and dons should be the chief advisers to the president in matters pertaining to scientific, economic and social issues
- The university should act as the principal focus upon which the lower echelons of academic hierarchy are centered. In this case the university should play and integral role in ensuring that the zeal of academic standards in primary and secondary levels of education is high.
- The university should play in the development of Iran is to pass information from one generation to another through teaching. Universities were crucial to the cultural and social vitality of the Iran and Islam.
- The university should help solve immediate problems facing the country and in the communities which they exist.
- The university should create new knowledge. Inventions worldwide are the result of the creative ideas of university professors and their advanced students.

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