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Commercializing University Research: A Case Study of Behbahan Islamic Azad University

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Abstract

The present research has been carried out to investigate the influential factors upon commercializing research results in Islamic Azad University of Behbahan. The population includes 116 university professors among whom 92 are selected and studied through random sampling considering Morgan's table. The methods are descriptive and experimental and data are collected using a researcher-made questionnaire. The literature has been reviewed and all influential factors upon commercializing research results have been extracted and classified in five individual, environmental-organizational, socio-cultural, statutory and commercial categories and investigated by 46 questions with 5 choices. Data are analyzed using description and deduction, mean, variance, standard deviation, one-sample T-test, independent T-test and variance. The findings indicate that the present condition of all factors are at an average level and have a meaningful difference with their optimum status. Also if is understood that all statistical subgroups show a meaningful difference among their ideas except for economical ones.

Keywords: *Commercializing Research results, Professors, Islamic Azad University of Behbahan.*

Introduction

Knowledge, in the knowledge-based economy era, as the running force of economy, is the mean reason of promoting exploitation and solving economic, social, political, cultural and biological problems. In knowledge-based

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economy, the research and production system are taken as storage and are the main sources of knowledge and ideas which are supposed to be turned into the essential products of the society and market (Mahdi, 2010).Great attention has been paid to research and development after world war II. In fact, research is taken as the basic reason of development and evolution in industrial societies (Mehrmohammadi, 2010). Commercializing approach at universities is derived from capitalism schools and on looks all activities carried out in order to take in the external resources by them (abbasi, et.al, 2009). The policy governing university research must be directed toward quick transmission of results to knowledge-based companies together with other organizations in order to attain public advantages (Fakur, 2004). Participating researchers in the increment based on commercializing their research is one of the influential factors on progress in developed countries (Elmi, 2009). National Innovation does not increase just by increasing the quantity of research and research plans; rather it is essential to connect research system to market research as the important outcome of innovation.

Definitely, higher education's entrance into commerce and marketing its own products and paying attention to market's need and customers' criteria are the result of some opportunities and positive outcomes, Enjoying the lowest level of exploitation, these outcomes help universities to have self –management and increase life standards (Immunity and Security), life quality, wealth and economic development. On the other hand, industries need to get use of research results in order to better their activities, have diversity of products, promote quality, economize, be customer-centered, maintain competition advantages, educate and improve staff conditions (Hashemnia, et.al, 2008).

Shirvani (2007) states the following issues as the main goals and missions of commercializing research results: increasing the market for knowledge and learnedness-based products; establishing and developing knowledge-based companies; providing the necessary regulations for creating learnedness-based work and income; realizing a chain from idea to find commercial products in the country; increasing the supportive role of universities/research centers in paving the way to feed the findings of inventors and innovators into the market; supporting the relationship between scientific-technological centers and industrial ones, services and investment; coordinating universities/research centers' activities with research and technology priorities passed by legal officials; and increasing income level of universities/research centers.

Universities' success in commercializing research results calls for needs and pre-requisites in different university units, industry and the dominant socio-economic conditions in these two sectors (Fakur, 2007, p.46). Dedicating the rights of intellectual properties resulted from university centers to them has had the greatest effect upon commercializing these properties, also the society can enjoy its advantages (Fakur,2006, p.31).

Today, plenty of barriers are observed before development and commercializing in country; they are as follows:

Political, statutory, economical, structural and organizational, communicative and ecological. Not being able to appreciate the market and the total capabilities of the workforce are to be mentioned, too (Mohammadi, Esmailzadeh and Dehnavieh, 2007). According to Bandaryan and Ghabezi (2007) some commercializing barriers are attributed to research (quality and quantity of researchers and their effectiveness), to the use of research in industries (appreciating and using research results in industries), to researchers (refusing to believe the commercializability of research- the extent to which research results are practical-, and lack of knowledge about commercializing process and finally to industry (lack of information about research results, the level they are practical , not trusting research results and lack of knowledge about commercializing process.

As there are great many influential factors upon Commercializing Research results, they are summed up by (Fakur, , 2007, 2006; Radfar, Khamseh and Madani, 2009; Mohammadi, 2009; Nemati and Jamshidi, 2007; Musai, 2008, and bandaryan, 2009) and classified as follows:

Individual: These factors are taken as informational knowledge about nature and being of commercializing, knowledge ability to solve problems and sense of research, knowledge and ability for entrepreneurship, market research and commerce, owing creative ideas, ability to think and analyze issues, curiosity to find answer to problems, knowledge rules, laws and regulations for commercializing research results, familiarity with needs, priorities and issues in market and industry sectors, familiarity with parks and science and technology development centers, knowing investment funds and finally knowing the process of patenting and having commercializing experience.

Organizational: They are s university managers familiarity with commercializing research results process, accessing knowledgeable counselors,

their interest and perseverance in research, research officials' informational literacy and accessibility of technological means.

Socio-cultural: Socio-cultural factors include the amount of cooperation and interaction among faculty members, status and importance of commercializing, existence of sense of competition, the existence and activity of scientific and technological parks and development centers, the existence and activity of investment funds, the existence of appropriate motives to commercialize research, having a knowledge-based economy in country, the level to which governmental and private sectors believe in researchers' research ability, the amount of cooperation between development and technological parks and centers with researchers and their observance of religions.

Statutory: These factors include having appropriate policies about commercializing research results, the existence of structures and processes related to commercializing research at universities, the existence of laws, rules and accurate regulations, appropriate condition to patent inventions and having structured and statutory support to offices.

Economical: Economical factors include financial charts and regulations, getting use of the profits gained from commercial conditions for research, researchers confidence about financial supports, the amount of financial support, the financial cooperation of governmental organizations to research and technology and the financial support of investment funds, public and private, from commercializing research results.

Literature Review:

In a case study by Fakur & Hajihosseini (2008), 7 universities are studied on "university entrepreneurship and commercializing research results in Iranian universities". The result is that these universities have moved toward entrepreneurship and commercializing research results. They reason as follows: Establishing related institutions at universities (Entrepreneurship Centers and Scientific Parks), taking steps to support patenting at universities, the rate of cooperation between universities and industries in carrying out plans and projects, also most universities tend to take part in commercializing activities such as giving licenses and participate as sub-companies in meetings. Other findings indicate that despite these positive trends, important activities such as giving licenses and transferring rights of intellectual properties or sub-companies related to universities are not common; activities such as patenting

and statutory protection of intellectual properties related to universities, which cover a wider range of responsibilities, are exclusively about providing guidance on how to patent an invitation. Even there exist no clear regulations about the ownership of intellectual properties rights at universities or about how to share incomes of these properties among university members.

Hashemnia and his coworkers (2009), in their studies on "the investigation of the influential factors upon exclusive incomes of university research, as an obvious outcome of commercializing at industrial universities of Iran" conclude that variable such as the number of published articles at journals and foreign conferences, common contracts with industries and higher education students' theses have a meaningful relationship with exclusive incomes of faculty members. They also suggest that university pay serious attention to the development of common contracts in short term and create stable relationship with commercial networks and determine the status and the income share of faculty members. They also have considered the entrepreneurial culture and the entrepreneurship role of faculty members.

Poorzzat, Gholipoor and Nadirkhanlu (2010) in a research entitled "Enumerating the obstacles entrepreneurship at universities and commercializing knowledge at Tehran University" point out the commercializing obstacles as follows respectively:

Bureaucracy and lack of flexibility in management system of university, lack of communication among investors, those engaged in industry and university, cultural differences between those involved in industry and university, weak protective laws for intellectual properties at national level, universities' dependence on governmental budgets, lack of universities' knowledge about needs and priorities of work and business sectors, feeling no need (lack of motivation) to commercialize knowledge by universities, the existence of difference types of benefits among these involved in university and industry, lack of financial support by universities from researchers to profit from the knowledge produced, enjoying different types of motives by those involved in university and industry, lack of enough resources dedicated to transferring technology by university, lack of industrial sectors' knowledge about technologies produced of universities, Professors' (Researchers') little share from the incomes of commercializing, not providing appropriate physical atmosphere and equipment to the researchers and getting use of the produced knowledge by them of universities, unfamiliarity of university researchers by

business skills, existence of no special department dedicated to commercializing knowledge at universities (an office for transferring technology) with skillful staff, lack of freedom to university professors to take part in business, the public mentality about public (non-profiting)-ness of universities and the importance of issuing the results of their research (instead of protecting them for commercializing), existence of a negative mentality about being involved in business among university members, low quality of the knowledge and technology produced at universities, lack of knowledge among university members about their intellectual property rights, false perception of professors and university managers about the value of their technology.

In 1999, science and technology council of Canada stated that the following issues are taken as the main obstacles and limitations of commercializing research studying the commercializing research at university level in this country: lack of investment in fundamental research; not including commercializing research result in the mission of university sectors in order to produce economic advantages for Canada; lack of bailing up a culture in accordance with commercializing at university level; the existence of policies to inhibit commercializing; lack of budget to divide modeling into several steps; lack of risky investment in order to start newly-founded companies; lack of mutual trust between university, industry and investors together with lack of mutual knowledge about limitations and tensions each sector faces; lack of enough attention to commercializing effects of university research by government, industry and investors; small and medium-sized industries down looking upon university sector as innovation resources.

Brown and his coworker (2000) carried out a research for European Commission in order to find out the best approach of function to transfer technology from research organizations. They pointed out the following issues as the keys for success; concentrating on market, organizational culture, organizing and internal managing of research organization, managing intellectual property rights, entrepreneurship and creating new work and businesses and establishing nets.

In 2003, Laukakanen studied the faculty members' views about commercializing methods in Finland; it was understood that faculty members considered their own roles the most important one among other commercializing factors. Commercializing mechanisms of basic sciences and biology tend more to patents inventions and issue profiting licenses,

whiletechnological fields tend more to sign contracts with industry, and establish commercial companies.

In a research by Siegel and Phan (2004) have investigated the influential factors upon productivity of institutes and officials related to commercializing university research. Having assessed the productivity of 45 universities and their bureaus in USA. they conclude that using technology transfer bureau at universities in an appropriate way, increases the economical value of commercializing process at universities. Their analysis indicate the following main challenges for commercializing at universities: existence of intellectual-legal barriers before university managers and faculty members, lack of enough encouragement for faculty members to do commercializing, lack of experienced staff in technology transfer offices and lack of available financial resources.

According to ITPS (2004), the most influential factors upon commercializing are taken as availability of private sectors' capitals; the rules governing the ownership of research results; entrepreneurship culture and skills; involving small businesses and governmental programs.

Another study by Alen's consulting group in 2004 indicates that the legal frameworks of intellectual properties; the structures and systems of commercializing management at universities; the quality of researches done at universities; availability of risky financial resources at the beginning levels of technological development; existence of local businesses with strange capacity to absorb technology and the participants' behavior in commercializing research system.

Research Method

Despite the increase of attractive design and policies for scientific commerce, little study over insufficient participation of researchers and inventors at universities prompted us to investigate the nature of the problem in Islamic Azad University of Behbahan in order to identify the existing conditions and important and influential factors upon encouraging faculty members to get use of research results.

The present study, considering the importance of commercializing research results- especially at Islamic Azad University which is dependent upon students' tuition as its financial source-, and lack of a comprehensive research on commercializing research results at Islamic Azad university, has investigated

the most important factors affecting research results from the viewpoints of professors at Behbahan Islamic Azad University.

In order to attain this goal, the following questions are put forward:

1. What is the existing status of individual characteristics affecting commercializing research according to faculty members of Behbahan Islamic Azad University?
2. Is there any meaningful difference between the present and optimal status of individual factors affecting commercializing of research results of faculty members at Behbahan Islamic Azad University?
3. What is the status of organizational factors affecting commercializing research by faculty members of Islamic Azad University of Behbahan based on their own view?
4. Is there any meaningful difference between the present and optimal status of organizational-environmental factors affecting commercializing research results of faculty members in Behbahan Islamic Azad University?
5. How is the status of socio-cultural factors affecting commercializing research by faculty members according to them in Islamic Azad University of Behbahan?
6. Is there any meaningful difference between the present and optimal status of socio-cultural factors affecting commercializing of research results by faculty members of Behbahan Islamic Azad University?
7. How is the statutory condition of the factors affecting commercializing research results by faculty members in Islamic Azad University of Behbahan?
8. Is there any meaningful difference between the present and optimal status of the statutory factors affecting commercializing of research results by faculty members in Behbahan Islamic Azad University?
9. What is the status of economic factors affecting commercializing research results by faculty members in Behbahan Islamic Azad University according to them?
10. Is there any meaningful difference between the present and optimal status of the economic factors affecting commercializing research results by faculty members of Behbahan Islamic Azad University?

11. How is the comparing and ranking different factors relating to commercializing research results by faculty members in Behbahan Islamic Azad University?

The population includes all faculty members of Behbahan Islamic Azad University (N=116). In order to determine the sample Morgan's Table is used and n=92; the sample is selected through random sampling.

Data are collected by a researcher-made questionnaire in order to attain research goals. This questionnaire includes questions related to demographic characteristics of faculty members (gender, work experience, age, major, employment status and commercializing experience) together with 46 five-choice question (to collect ideas about the present status of each influential factors upon commercializing of research results by faculty members). The Likert scale with 5 items is used with choices varying from "very weak" to "very good" and scores from "1 to 5" are dedicated to them respectively. Of the 92 questionnaire sent to subjects 89 were completed and returned.in order to test the validity of the questionnaire, valuable opinions of experts at universities and out of universities were taken into consideration and in order to do away with ambiguities 10 of faculty members in research population were selected to give their ideas and suggestions about the ambiguities and the way to remove them. Based on their suggestions the questionnaire was edited to have an appropriate use of concepts. In order to test the reliability of the questionnaire, Cronbach's Alpha was used. Using SPSS software reliability rate is taken as 0.955. Data are analyzed through SPSS software getting use of Mean, Variance, Standard Deviation, and using one sample (T) of derivational statistics.

Research Findings

The findings (Table 1) indicated that based on faculty members' view in Islamic Azad University of Behbahan, the individual factors' influence on commercializing research is at an average level (M=3.561). As the finding of T test (Table 2) show, there exist a meaningful difference between the present and optimum status of individual factors affecting commercializing research results by faculty members in Islamic Azad University of Behbahan with the confidence level set at p=92%.

Table 1: individual factors influencing commercializing research results according to faculty members.

Factors	Number	Mean	Std. Deviation	Variance
Individual	89	3.561	0.938	0.881

Table 2: The results of one sample T test for meaningfulness of the present and optimum status differences affecting commercializing research results.

Factors	T value	Df	Meaningful level	Std. error Mean
Individual	25.804	88	0.000	9.285

In order to have an accurate and comprehensive analysis of the viewpoints of samples, having studied the individual factors in each sub-groups, independent T-test and analysis of variance (ANOVA) were applied. This analysis, according to different variables indicates that there exists a meaningful difference viewpoint of sub-groups of samples based on their individual factors such as gender, age group and employment status. In other words, there is no unity about individual factors' status affecting commercializing research results.

The present status of environmental-organizational factors affecting commercializing research results, according to faculty members of Behbahan Islamic Azad University (Table 3) is at an average level (Mean=3.296). The findings of T-test (Table 4) show that there exists a meaningful difference between the present and optimum status of environmental-organizational factors affecting commercializing research results with the confidence level set at 95%.

Table 3: Environmental-organizational factors status affecting commercializing research results, according to faculty members.

Factors	Number	Mean	Std. Deviation	variance
Environmental-organizational	89	3.296	1.058	1.120

Table 4: One sample T test findings for the meaningfulness of the difference between present and optimum status of environmental-organizational factors affecting commercializing research results.

Factors	T value	Df	Meaningful	Std. error

			level	Mean
Environmental-organizational	29.285	88	0.000	12.758

Independent T test and ANOVA were used in order to investigate the individual factors' status among samples. This shows a meaningful difference for environmental-organizational factors based on age group and employment status, but there is no meaningful difference for variable such as gender, work experience and commercializing experience. In other words, there is no similarity between the scores gained from different sub-groups of environmental-organizational factors. It is also understood that socio-cultural factors (Table 5) affecting commercializing research results according to faculty members of Islamic Azad University of Behbahan possess an average level (Mean=3.304). Also there exists a meaningful difference between the present and optimum status of socio-cultural factors affecting commercializing with p=5% (Table 6).

Table 5: Socio-cultural status of the factors affecting commercializing based on faculty members' view

Factors	Number	Mean	Std. Deviation	variance
Socio-cultural	89	3.304	0.908	0.825

Table 6: One sample T-test findings for meaningfulness of the difference between present and optimum status of factors affecting commercializing research results.

Factors	T value	Df	Meaningful level	Std. error Mean
Socio-cultural	24.222	88	0.000	9.083

The accurate investigation of samples' views about the status of socio-cultural factors is done by using independent T-test and ANOVA. The findings indicate a meaningful difference of socio-cultural factors in sub-groups according to variables such as gender, age group and employment status but no meaningful

difference is observed for work experience and commercializing experience. Once more, it is concluded that there is no unity among faculty members for socio-cultural factors.

The statutory factors affecting commercializing research according to faculty members (Table 7) are in an average status (Mean=3.322). One sample T-test application (Table 8) indicates that there is a meaningful difference between present and optimum status of statutory factors affecting commercializing research results with the confidence level set at 95%.

Table 7: Statutory factors status affecting commercializing research results according to faculty members.

Factors	Number	Mean	Std. Deviation	variance
Statutory	89	3.322	1.048	1.099

Table 8: One sample T-test findings for meaningfulness difference for present and optimum status of statutory factors affecting commercializing research results.

Factors	T value	Df	Meaningful level	Std. error Mean
Statutory	29.896	88	0.000	6.290

Application independence and independent T-test and ANOVA show that there exist a meaningful difference between some variables of statutory factors' status such as gender, work experience and commercializing experience but they show no meaningful difference for age groups and employment status variables.

Based on the analysis (Table 9) done on the economic status of factors affecting commercializing research results according to faculty members of Behbahan Islamic Azad University, an average status is found for them (Mean=3.57). Similar to the findings of one sample T-test (Table 10) for other factors' status, it is understood that there exist a meaningful difference between present and optimum status of commercial factors affecting commercializing research results with the confidence level set at 95%.

Table 9: Economic factors' status affecting commercializing research results according to faculty members.

Factors	Number	Mean	Std. Deviation	variance
Economic	89	3.57	1.016	1.034

Table 10: One sample T-test results for meaningfulness of the difference between present and optimum status of economic factors affecting commercializing research results.

Factors	T value	Df	Meaningful level	Std. error Mean
Economic	22.216	88	0.000	7.116

Independent T-test and ANOVA are used to have an accurate analysis over the status of economic factors in each group of samples. The findings indicate that all variables except gender show that there is no meaningful difference between different economic factors' statusfor subjects. In other words, the score dedicated to different economic factors for different sub-groups is approximately the same.

Although all factors are at an average level and possess a meaningful difference with their optimum status, there exist very minor and trivial differences among them. In other word, although they all possess a similar status, average, there are same small differences among them which help us to categorize them to the groups with very good status to those with very bad one based on faculty members' viewpoints. The criterion is the average score for each factor (which is obtained by adding up to the score for each question related to the factor and dividing to the number of all questions for each factor (Table 11).

Table 11: The status of influential factors affecting commercializing research results according to faculty members' viewpoints.

Factors	Number of items	Number of Respondents	Sum of Scores	Mean
Economic	7	89	318	3.57
Individual	10	89	317	3.561

Statutory	6	89	295	3.322
Socio-cultural	10	89	294	3.304
Environmental-Organizational	13	89	293	3.296

Discussion and Result

In this part, the findings are discussed to give a clear picture of the problem. It is worth mentioning that as there has been no similar research with the same title or hypothesis, literature review is used to interpret and justify the findings.

The findings indicate that according to faculty members in Islamic Azad University of Behbahan, individual factors affecting commercializing research results are at an average level (Mean= 3.561). Considering the attention university officials pay to entrepreneurships culture at universities in recent years, university researchers attempt to do practical research compared to the past and variables such as the number of published articles in journals and foreign conferences, common contracts with industries and students' thesis at higher education, which has a meaningful relationship with exclusive incomes of faculty members (Hashemnia, et. al., 2009), on one hand and the negative mentality among university members about getting involved in business, their lack of knowledge about intellectual properties' right, the false perception of professors and university managers about the value of their technology, getting little share from the incomes of commercializing research results, lack of appropriate physical atmosphere and equipment providing by universities to the researchers in order to exploit the knowledge produced by them, their lack of familiarity with business skills, not having a center with experienced staff to manage commercializing knowledge at universities (knowledge transmission office), lack of freedom for professors to engage in business (Pourezzat, Gholipour and Nadirkhanlu, 2010). On the other hand, emphasize that the individual conditions are appropriate but also there exist some shortcomings that pose individual factors at an average status.

Environmental-Organizational factors affecting commercializing research results, according to faculty members of Behbahan Islamic Azad University possess an average level (Mean=3.296). T-test findings show that with the confidence level set at 95%. There exists a meaningful difference between the present and optimum status of environmental-organizational factors affecting commercializing research results. In order to justify this findings, it is useful to

point out Fakur and Hajihosseini's research (2007), who conclude that the universities they have studied have taken steps to support patenting activities at universities, and that the good amount of cooperation between universities and industries to do projects have led to entrepreneurship and commercializing research results. This is done through establishing institutes such as entrepreneurship centers and technology parks at universities. As the above mentioned issues are not realized in Behbahan Islamic Azad University, it is impossible to expect an acceptable condition at this university. Also, the activities done out of the university to start an office to connect university to industries and the companies' tendency toward using university researches, provide an average status to Behbahan Islamic Azad university.

Another finding of the present research is the present status of socio-cultural factors affecting commercializing research results according to faculty members of Behbahan Islamic Azad University which possess an average one (Mean=3.304).

In 1991, science and technology council of Canada stated that different viewpoints of those involved in industry and university, lack of mutual trust between university, industry and investor, lack of mutual knowledge about the limitations and tensions both sectors face and lack of enough attention to the effects of commercializing research results by government are the main socio-cultural barriers. The different culture of researchers and those involved in industry, the dependence of university on governmental budget, the difference between the kind of benefit researches and artisans get, the mentality that universities are public (not profit making), and the necessity to publish university researches instead of protecting them for commercializing are the main barriers before commercializing at Tehran University which are pointed out by Pourezzat, Gholipour and Nadirkhanlu (2010) in a research entitled "Enumerating the obstacles entrepreneurship at universities and commercializing knowledge at Tehran University". They are the socio-cultural factors which are justified and generalized to Behbahan Islamic Azad University, too. These issues cause commercializing research results not to have an appropriate status based on socio-cultural factors.

It is also proved that the present status of statutory factors affecting commercializing research results, according to faculty members, possess an average level (Mean=3.322). Fakur and Hajihosseini (2008) stated that having done a case study at 7 universities in Iran entitled "university entrepreneurship

and commercializing research results in Iranian universities", they have concluded despite positive trends, still the important activities such as issuing licenses, transmitting intellectual properties rights, or the sub-companies derived from universities are not common and activities such as registering and protecting intellectual properties' rights at universities- which cover a wider range of responsibilities- are limited to providing the information about how to patent an invitation. There are even no clear rules about how to share the incomes among researchers or ownership of intellectual properties rights.

Poorzzat, Gholipoor and Nadirkhanlu (2010) believe that bureaucracy and lack of flexibility in management system of universities, lack of communication and networks among investors, artisans and researchers, weak protective laws for intellectual properties at national level are the main factors which inhibit commercializing research results.

The analyses also illustrate an average status for economic factors affecting commercializing research results according to faculty members of Behbahan Islamic Azad University. A mean score of 3.57 is dedicated to it.

Factors such as universities' reliance on governmental budget, insufficiency of professors'/researchers' share from the incomes of commercializing research results, stated inPoorzzat, Gholipoor and Nadirkhanlu (2010), lack of enough reward to encourage faculty members to commercialize research results stated in Siegel and Phan (2004) and factors such as lack of investment in fundamental researches, not including commercializing research results among university missions to bring about economic benefits in Canada, lack of human force and financial resources in institutes to transfer technology, lack of budget for modeling, lack of risky investments to start newly established companies, industry and investors, little and medium-sized industries ignorance of university as a source of innovation in the study carried out by science and technology council in Canada (1999) are taken as the main economic barriers. A Behbahan Islamic Azad University is a newly-established one and similar to other Islamic Azad universities dependent upon students' tuitions economically, accordingly it is not so strange financially. This causes the university not to have an appropriate status based on the economic factors affecting commercializing research results.

Suggestions

A) Today that commercializing research results have turned to the most dominant discussion in higher education, it is expected that universities apply the most effective methods to support and strengthen the national system of research-based innovation and remove the barriers to enable themselves to commercialize research results. This way, there would be a logical comprehension of the strategic importance of selling researches based on the scientific potentials at universities, and accordingly the country develops scientifically and technologically.

B) Moving towards commercializing research results, the projects with both technological and commercial potentials must be selected. Therefore, considering the costs and the time needed to commercialize research results, it is important to have a thorough assessment of commercial potential of a project before dedicating time and resource on it.

C) Universities are expected to follow these rules:
   - Enriching the scientific knowledge related to commercializing;
   - Studying the methods of promoting quality and quantity of commercializing at universities;
   - Contributing to the spread of commercializing culture at universities;
   - Introducing different methods of commercializing technology;
   - Establishing and supporting the intellectual properties system to protect intellectual properties and its functions;
   - Getting familiar with different methods of transmitting technology from universities to industries;
   - Attempting to do the researches related to commercializing;
   - Providing sufficient financial support to commercializing research results; and
   - Removing the barriers before commercializing research results.

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