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**Enhancing the Partnership between the Egyptian
Universities and the Productive Institutions to Finance The
Scientific Research**
(A Proposed Perspective)

A M. Ed. Thesis

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Study Summary

1. Introduction

There should be a great change in the mission, roles and functions of the university as a result of the technological, scientific, economic and social changes that came over the international arena in general and the Arab region in particular. The Arab universities are required to keep pace with these changes and to respond to them. Consequently, many voices are now asking the universities to perform new roles and functions necessitated by the technological and scientific revolutions as well as the information and communication revolution which have turned the world into a small global village. The universities are clearly required to help solving the daily difficulties faced by the society in the fields of production, services, doing researches, carrying out studies and providing scientific consultations and providing them to the decision-makers in the social, political, economic, industrial and managerial fields.

Consequently, in addition to performing its three functions; namely, teaching, doing research and community service, the university is now required to perform a fourth function -or a fourth dimension-which is the participation with the services and production sectors. This fourth function or dimension is called the productive or investment university. Accrediting this dimension has turned universities in the industrial and developed countries from government-financed universities into self-financed universities. The universities started to make great profits in the same way that the companies, factories and banks make profits for their shareholders.

But the situation in the developing countries is not like that as the finance of the production or the private sector to the universities is too low, in addition to the absence of the good employment of the limited resources available to the scientific research and the technological development.

This is also accompanied by the problems associated with the facilities and tools for which there is no maintenance, repair or insurance, especially the highly expensive equipment and instruments. What aggravates the matter is their rare use and the low standards of benefiting from them as a result of the spread of some negative phenomena like the semi-personal possession of these equipment and instruments for the persons who have them in custody and which are not in the custody of the institutions which they work in, what affects the way they are used and benefited. This comes in addition to the low capitals for increasing or modernizing the equipment necessary for the scientific research

It has also become necessary to evaluate the Egyptian industry and forming its production not only on the basis of the relative advantages of the traditional production factors but also on the basis of the competitive advantages based on knowledge and technology. It's no longer possible for the relative advantages to achieve competitive capacities with the rates known in the 1960s and the 1970s. This is due to the fact that the bases of competition is formed gradually from the processes of creating and understating knowledge

The technological dynamicity depends on the technological efforts and the exports in the first place as they complete each other to a great extent ,but this factor depends on importation in the developing countries and not on creativity and innovations in the products as the developing countries need to import a great deal of their technology. As a result many of the countries tried to overcome this problem through setting a balance between importing technology and producing it locally, and so they started to adopt the Patents of its citizens and converting them into products by which they contribute in the scientific competition giving them a high position in the world.

2. The Problem of the study

In the light of the above mentioned, it's clear that the university scientific research is facing so many difficulties ,the most important of which is the lack of finance .There are many attitudes to overcome these difficulties represented in connecting the universities and the production institutions together. As a result ,many of the world universities try hard to encourage the research productivity in general and the financed research in particular through attracting the monetary finance and raising its standard whether from inside these institutions or from outside them through getting help from the private sector or the governmental one. As a matter of fact a great deal of the monetary finance introduced to the western high-education institutions comes from the private sector in the form of grants, gifts or research contracts .The competition between these institutions becomes so necessary to get high standards of finance .This situation is missing in many of the scientific research institutions in the developing countries.

Thus, the problem of the study is represented in the following main question:

How can the participation between the universities and the production institutions be activated with the aim of supporting the finance of the university scientific research in the light of the contemporary international trends?

A group of sub-questions are derived from this main question as follow:

- 1) What is the concept of participation? What are its patterns?
- 2) What are the justifications of the participation between the Egyptian universities and the production institutions? What are its benefits and risks and what are the difficulties facing them?
- 3) What are the most important mechanisms through which the participation between the universities and the production institutions can be activated in the field of financing the scientific research and overcoming the difficulties in the light of the previous literature?
- 4) What is the statue-quo of financing the scientific research in Egypt? What is the role of the participation between the universities and the production institutions in the field of financing the scientific research?

- 5) What are the contemporary international attitudes in activating the participation between the universities and production institutions in the field of financing the university research?
- 6) What is the suggested conceptualization of activating the role of participation in financing the university research?

3. The study limitations:

The study will be limited to the following:

- One of the university activities which are the scientific research that represent the basic focus of the study.
- A sample of the governmental universities.
- A sample of the production institutions.

4. Aims of the study:

- 1) Identifying the concept , forms and schedules of participation between the universities and the production institutions
- 2) Shedding the light on the most important contemporary international attitudes in financing the university research
- 3) Evaluating the reality of financing the scientific research in Egypt and the role of the participation between the universities and the production institutions in financing the scientific research
- 4) Concluding the most important mechanisms through which the participation between the universities and the production institutions can be activated in the field of the scientific research and which help to overcome any difficulties that might be faced.
- 5) Concluding a suggested conceptualization to activate the role of the participation between the universities and the production institutions in financing the university scientific research.

5. The importance of the study:

The importance of the study is due to:

- 1) The importance of the coordination between universities and the production institutions in supporting the scientific research in all aspects and in overcoming many of the difficulties facing the scientific research in Egypt.
- 2) Keeping pace with the international trends in using the participation as a means of developing and improving the scientific research.
- 3) The scarcity of the Arabic studies –as much as the author knows- that dealt with the participation subject, especially in their role in financing the university scientific research.

- 4) The study represents a scientific attempt to overcome many of the difficulties facing the scientific research in Egypt represented in the finance and connecting the scientific research to the reality and problems of the society.
- 5) The study provides a great deal of information for the decision makers concerned with the university scientific research and the experts and researchers in the field.
- 6) The study is considered a theoretical contribution that may achieve a step forward towards the university independence by illustrating many of the finance resources that enable it to go towards the academic freedom.

6. The study methodology

This study depends on the descriptive methodology through which the statue quo of the scientific research finance in Egypt is described. Within this methodology, the analytic methodology will be used to reach a suggested conceptualization to activate the role of the participation between the scientific research and the production institutions in financing the university research .In addition; a field study was carried out. Through this field study, questionnaires and meetings were executed on the experts and professionals in the field of research with the aim of identifying the obstacles facing the activation of the participation between the universities and the production institutions in the field of financing the scientific research and how to overcome these obstacles.

7. The study procedures

They can be summed up as follows:

- 1) Determining the general frame of the study through the study problem, aims and terminology in addition to a sample of the previous studies and the study procedures
- 2) Determining the theoretical frame of the study ,the participation concept and patterns ,the justifications of the participation between the universities and the production institutions in the high education field in general and the values and ethics on which the participation between the universities and the production institutions is based in the field of financing the scientific research
- 3) A field study to identify the statue-quo of the university scientific research and the most important ways through which the role of the participation between the universities and the production institutions can be activated in the field of financing the university scientific research and the obstacles that stands in the way of achieving it.
- 4) Analyzing the results of the field study
- 5) Putting a suggested conceptualization to activate the role of the participation between the scientific research and the production

institutions in financing the scientific research in the light of the contemporary international attitudes and the results of the field study

8. Summary of the study results

The researcher presented the study summary in a suggested conceptualization which included the most important tasks that should be done by the government, the universities and the production institutions to activate the research participation between the universities and the production institutions .A summary of them can be summed up as follows:

- 1) As for the tasks that the government should perform :
 - The government should co-ordinate between the universities and the production institutions to set the targeted goals of the participation according to their points of view
 - The government should co-ordinate between the two parties to clarify the responsibility lines in the participation
 - Providing rewards for the partners
 - Providing a societal culture that support the participation with the encouragement from the leadership and the participation of the citizens in the participation activities
 - Providing a mutual and realistic societal conceptualization of the participation based on the weaknesses and strengths of the society
 - Constituting stable and transparent legal references and enacting systems and instructions for protecting the investor and the university
 - Increasing the introduction of the research questions that receive the attention of the researchers and the businessmen
 - Working on building integrated information networks for exchanging the information and the scientific research results between universities and the production institutions
- 2) As for the tasks that the universities should perform :
 - Establishing consultation centers inside the universities to serve the production institutions
 - Depending on the teaching staff who have previous experience in asking for the financed researches.
 - The administration of the universities and the research centers should expand their services for the private sector institutions.
 - Exchanging visits between the professors and the staff in the production institutions.
 - Using the mutual supervision system between the university professors and the institutions experts over the researches of the post-graduate studies students

- Reducing the teaching burden of the researchers in the teaching staff especially for those who work among a work team of carrying out the studies directed for the community service.
 - The participation of experts from the production institutions in preparing the educational programs for the university students
- 3) As for the tasks that the production institutions should perform :
- Making the university professors participate in the board of directors of the production institutions
 - Setting up a fund for financing the research and the development with the participation of the production institutions
 - Giving the priority to signing contracts with the Egyptian professors when the institutions carry out researches
 - Facilitating the process of carrying out researches and experiments in the laboratories owned by the production institutions for the professors and the research students
 - Building the scientific basis in the companies through the research and the development
 - Providing a database of the qualified technical workforce who want to work in the field of the financed research
 - The similar industrial institutions in a specific industrial field should do mutual research in participation with the universities so that the cost will be divided and all the parties make use of the results of the scientific research
 - The industrial sector companies should specialize a part of their profits to spend on the research activities

The suggested proposal to the problem of the study also included some solutions to the problems that face the participation between the universities and the production institutions such as the thinking property rights, the publication issue and other obstacles that might face the participation between the universities and the production institutions.