

Collaboration between enterprises and research physicist - A measure to boost in physics research in Vietnam

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Introduction

Enterprises linking model with scientific research in universities or research institute have developed strongly in many countries. This problem has also been much interested in Vietnam in the last few years and obviously it is much beneficial for both scientists and business. In Vietnam, an annual state budget allocates to the scientific research in all fields at universities and research institutes, many research has been very successful and as result published in several well-known international journals. Many research results can continue develop or apply in the fields of technology, production at enterprises. However many obstacles also occur by many reasons, such as: shortage of funding to continue research, no appropriate mechanism for technology transfer, or simply no exchange of information between businesses and scientists. Recently, the collaboration between business and universities in research has been started to deploy in some university such as Hanoi University of Technology, University of Technology although it often concentrated only in the sectors of information technology, biotechnology, ...

In physics, currently the companies have not much interested in investing in research results (theoretical and experimental). Therefore the development of this model for studying the physical results are very necessary and is considered as an important method to attract more fund for physics research so that it may improve the quality of research study physics. Models, measures and concrete statistical data is gently mentioned as follows

Problems approach

1. Cooperation between universities, research institutions with enterprises in scientific research and the interests of the parties

1.1 For enterprises

Cooperation with the universities, institutes is considered as attractive investment channel for enterprises to improve quality of the product.

- Base on idea, innovation of the researchers in the universities and institutes, the enterprises may quickly produce and introduce the new product to the market

Giving supplementary "artificial capital" to the researchers. It also their the grey matter

Providing the chance for enterprise to promote its business activity and implement the social obligation.

1.2 For Universities, research institutions

Supplementing the budget for the research activities

Increasing the financial self control right in researcher activities.

- Quick putting the research results into the practice

In general, the cooperation bring the beneficial for all involved parties

2. The question is how this collaboration really effective

Cooperation can not play unilaterally. All concerned parties must actively look to the other, promote, expand and diversify their relations

Enterprises must actively set all issues to study and be solved in practice by researchers

Scientists need to actively inform their research results to enterprise. The results of this study can be applied immediately in practice. In some case, it may require additional funding from the business

Beside businesses and scientists, it is good idea if we could involve specialist advice on legal, appraisal value of scientific research, drafting the contract, to ensure mutual benefits to all parties and the most important thing is to keep the long and reliable cooperation between businesses and scientists (the services of science, technology transfer)

3. Actual situations in Viet Nam

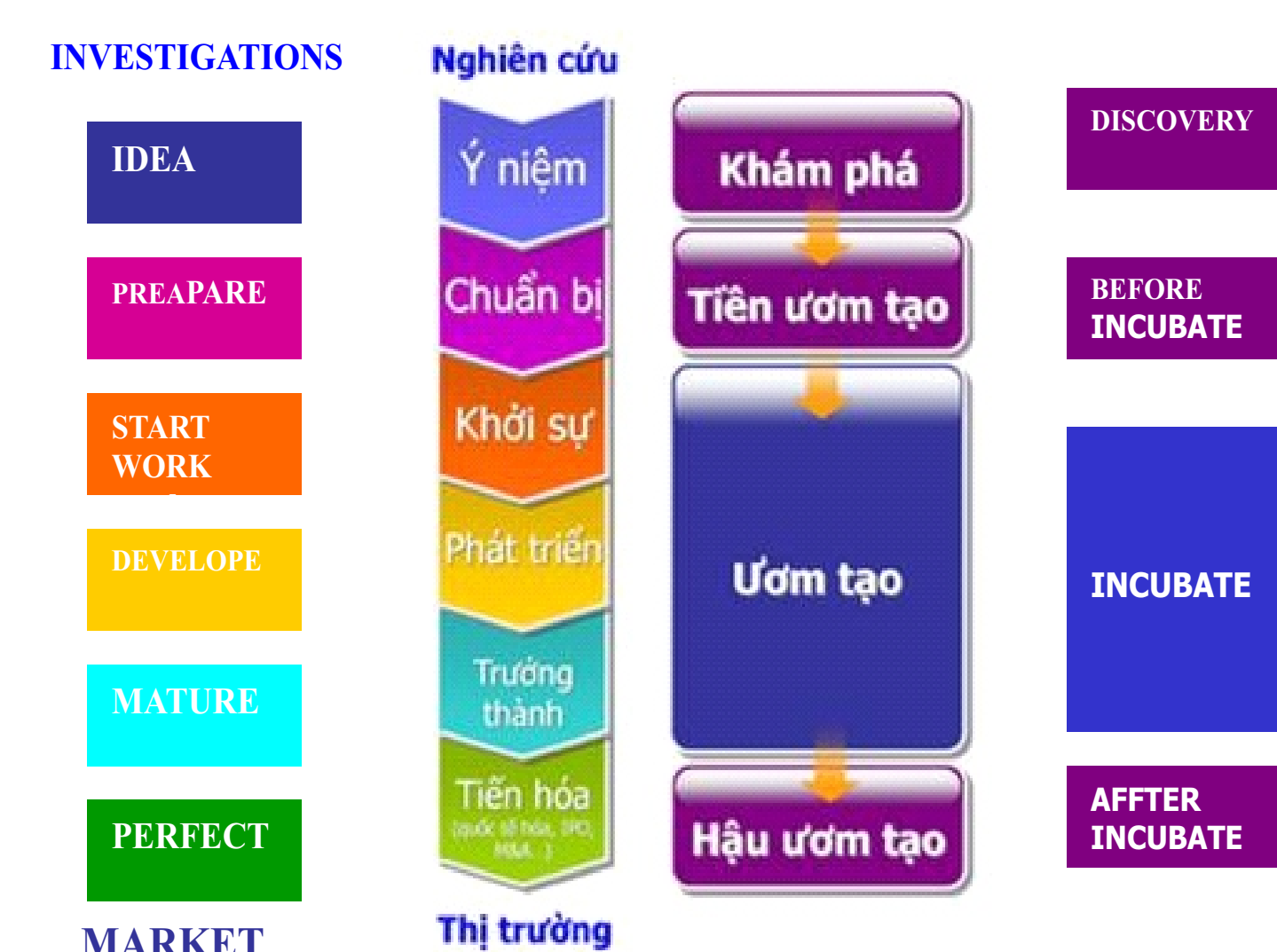
Investment, low risk but get high profit and can quick recover its capital). Many enterprises have funded to a researching the university and institutes. Most of the research results gotten from the governmental funded projects and were applied to businesses. Obviously it has brought many benefits to the entire society.

For industry, or basic and applied scientific research such as research in physics (condensed matter physics, material physics, physical electronics, biomedical physics, high energy physics,...) often face difficulties due to the expense of investment in research in this field is big but high-risk and long-time capital withdrawal. Most research in physics now Vietnam is expect to those funds granted either by the government or by the foreign research institutes, universities (in practice, the foreign research institutes and universities often focus on investment of the training in Vietnam, but they are very little interest in investment research)

Proposed Models

1. Technology incubator

Technology incubator is division belong to the universities or research institutions (universities and enterprises investment funding), activities to support technology viable ideas become product configured. After the nursery can make the output of products which business can apply to organizations production.



2. Technology business incubator

Technology business incubator is a division belongs to the universities or research institutions activities to support establish enterprises based on the ideas or technology platform. After the nursery, its output products may apply in the technology sector.

3. Part-time staff in enterprise

The researcher in the universities, institutes spend from 1 to 3 months per year to work in the enterprises and fully understand the demand of the social and enterprises. Base on it, the researcher determine their scientific activities in the coming time

4. Establish universities and research institutions of enterprises

5. Seek investment funding from the business associations or Fund development of science,...

Conclusions

The development of this model for studying the physical results are very necessary and is considered as an important method to attract more fund for physics research so that it may improve the quality of research study physics.

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For discussion