

Efficient Support of Innovations

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1. Introduction

The expansion of the global processes resulted in the fact, that the financial and economic crisis in some of the developed countries inevitably moved to the rest of the world. It becomes more and more obvious that different countries will be ranked in a different way after overcoming of the crisis and the recession. The state administrations realize that ensuring of a worthy place in this arrangement depends to a great extent on their opportunity and skill to carry out timely and efficient support of the innovations and thus to accelerate the innovative development of their countries. This is valid to an enormous degree for a small European country like Bulgaria. The ways through which this may be realized, are known in general but the accents, the instrumentation, the necessary financial and other means for the organization, the financial and other provisions continuously change [1-5].

2. Support of education – support of the innovative development

Contemporary Bulgarian high educational system was mainly formed during the construction of a centralized economic system hence it is mainly adapted to serve this system. This is particularly valid for the engineering high schools. In them, as a rule, the students gain good basic theoretical fundamental learning with the purpose to perform independent research activity. Parallel to this, there are is not sufficient knowledge in the financial-accounting sphere related to real economy processes.

Recently the level of teaching specialists in Bulgarian high schools- including those with an engineering profile, is starting to fall down. The technical aspects are dominating in the education of the engineering staff. The market economy, developed nowadays, requires the alteration of the accents – it needs not only potential researchers, but market oriented innovators.

On the other hand, a considerable number of semi-legal high schools, almost entirely in the area of humanitarian and social sciences, degrade the requirements and cause devaluation of Bulgarian education.

It is evident, that there is not sufficient relation and co-ordination between business and high schools. The business enterprisers do not invest in high education, and on its hand it is outlying the actual problems of economy. The lack of a co-operative science has forced many creative specialists to leave the country and find professional realization abroad. Bulgarian business is making attempts to employ high qualified workers for routine operations with payment, several times lower than the European one.

The inadequate situation now needs and has to be changed, but this implies regarding the innovations as a problem of national concern, with all general requirements and consequences. It also sets some necessary alterations in the approach and way of business management, the raising of its role of an active supporter of innovation economy. High education also needs a lot of reforms, in order to face the new economics requirements.

3. Where is Bulgarian business

For the time being the participation of Bulgarian business in the creation of innovations is quite modest. It comprises only 0.16% of Gross Domestic Product (GDP) and is twice smaller than the analog portion of the state [9]. This relation is just the inverse in the advanced countries. In fact, Bulgarian business does not rely on innovations – it invests mainly in resorts building, in manufacturing industry, in real estates, in services, etc. That is why Bulgarian business spends almost no funds from its revenue for research and development activities [7].

In Europe and USA up to 15% of the incomes are allocated for Scientific Research and Development Activities (SRDA). For example, it could be pointed out that the funds of “General Electric” (USA) for SRDA, for 2004 they have reached the sum of 4 billion US dollars.

The most significant investors in the innovations are transnational companies (TNC), which as a rule integrate a large number of small and medium size enterprises for co-operative production of innovation products. This concerns mainly the automobile manufacturers, which assign the production of many high technologic details, parts and systems to such enterprises.

Similar co-operation brings considerable profits to the TNC itself, and also to the small innovation companies, connected with it. The introduction of innovations in such a company is realized faster and with fewer expenses than in large companies. So this connection is based on considerable economic interest. In this way the TNC decrease considerably the risk of innovations adoption delay, with guaranteed continuous improvement of the products quality.

At the present moment there are not very powerful TNC in the industry of our country. There are not any co-operations, uniting many innovation companies. The enterprises of military industry and shipbuilding did not occupy this place either. The big machine-building plants were subdivided and hardly survive. The intellectual property has lost its significance, and new is not appearing. It is an

unpleasant fact to note, that unlike many Central European and East European countries, Bulgaria is not the host of any automobile and motor building TNC.

All this contributes to the insipid innovation background in the country, which deprives the economy of dynamic and perspective character.

4. Material and financial support

A lot of industrial premises exist, inherited from centralized economy, which may be used to develop technological parks and business incubators.

The main disadvantage of the technological parks, constructed till now, is the lack of strict control on the innovativeness of the companies, occupying the sites. Usually these are just small companies, imitating innovativeness versus low rent of the areas suggested.

There are even cases, when different small companies, which do not interact, are collected in one and the same place. This is not at all the aim of technologic parks construction.

The leasing form of premises rent and the use of the equipment of a large company, by several smaller companies is quite randomly used. The problem with credits, granted by a large company to smaller co-operating companies at lower interests, is similar.

Usually the big co-operation provides commercial credits to the smaller innovation companies in the form of a supply of the necessary materials and consumer goods for the production, or of different machines and equipment with remitted payments.

In case the so called “forfeiting” is used, the small innovation companies grant the corporation bill against the credit received, that are paid off after the production and sale of the innovation products. In this way the large company controls the fiscal flows and self guarantees the return of the credits provided.

If the factoring form is used, then a financial mediator credits the innovation company against the right to earn the payment of the innovation products.

The most efficient form of interaction between the large company and the innovation companies, co-operated with it, is by foundation of respective venture funds, created with a capital of the corporation. They are supervised by management teams, selected after a competition, who are paid with respect to the final result of innovation introduction. Unlike the classical venture funds, such specific corporative funds are “evergreen”, i.e. the corporation can always add or draw out capitals from them.

These venture funds (sometimes called “captive” or “semi-captive” – because of their close relation with the corporation), are mainly directed to new innovations in the small co-operated companies, and to a lower degree – to SRDA in the corporation itself.

Such an approach equalizes the risks of bankruptcy of the small innovation companies, because the big corporation undertakes entirely not only the financial, but a part of all the business risks.

The second in significance priority in the realization of the innovations is the shortening of the time for new production release on the market. This comes from the fact that the time from the design of the experimental sample up to mass

production might last several years and comprise one third of the time of the complete innovation process.

In this case the use of a network for sales and trade-marks of the large company may give invaluable aid to the small innovation companies in their breakthrough on the market. The existence of a stable trade network and well known brands guarantee stable sales of the innovation company, some advantages among the competitors and considerable added value. It is not free of payment, but against sharing a part of the profit with the large company. The corporation must trace whether the risks undertaken after granting its own trade-mark to the small innovation companies will not cause any discrediting in case of market failures.

For this reason, at least at the beginning, the large corporations control carefully the quality of the products, released with their trade-marks, and the innovation production, distributed by their network.

5. The role of the state

At the present moment there is not any country that does not declare the support of innovation development as its main goal. And though the problem of the intended resources is basic, the second place is occupied by the problem of the efficiency of these resources usage.

Most of the countries are principally interested in preservation of the social stability, so the state resources are mainly directed to the solution of these problems and the resources spent on innovations are always insufficient. If these resources are added by the sum necessary for support of science and education at good level, the general problem of budget apportion becomes hardly solved.

These difficulties for Bulgaria are intensified by the lack of corporative science, which could ensure stability of business on the boundary between fundamental science and the market, where there is a gap at the moment.

The lack of corporative science is one of the essential causes for the lag of our country in the area of innovations in comparison with the countries - EC members, the countries of Central Europe included.

Innovative economy cannot be constructed without applied science, directed mainly towards the market.

There exist several possibilities to solve the problem of corporative applied science:

A. Certain circles of Bulgarian business think that a large part of the researchers in BAS and high schools must be forcibly directed towards applied activity on market principles. For these circles this is the cheapest and easiest way to solve their problems, since they do not accept any engagements concerning the construction and the support of such applied research units – everything is on the account of the state. However, this approach is nowhere successful.

It has to be added that the further weakening of Bulgarian fundamental science, which is hardly surviving, carries the danger of scientific and educational deterioration and loss of any perspectives.

B. In a lot of transition economics, the department science was partially preserved, at that some of the research-applied unit continued to function as state-private organizations, registered under the Trade law. They use partially state

subsidies, the remaining part of the necessary resources is supplied by contracts on a market principle.

For our country this is a possible alternative, when business could contribute to the construction of efficient corporative science. This could serve as a model in creating modern applied institutes, similar to the working in the past. This requires statesmanlike approach and large scope in the realization of the program.

C. The state can make an attempt to direct business towards corporative science, stimulating its interest. For this purpose it is necessary to alter a number of laws and regulations in a way that will allow the profits in accomplishing innovative activity to be greater or at least equal to the profits from other activities.

The experience of some countries, such as Germany could be shared, where there exist tax preferences for companies, which spend 60-70% of the total expenses for salaries. This approach aids to a significant extent the companies, directed towards information-communication technologies (ICT).

In USA tax credit is granted to the innovation companies. In Japan 20% of the expenses for SRDA are extracted from the due tax amount, which may reach 10% of the total tax obligations. Besides, the expenses for SRDA (except the buildings depreciation) are considered when determining the profit. This Japanese system is of proved efficiency in practice.

The accelerated depreciation of a fixed tax is accepted as a good approach, by which purchase of new equipment by innovative companies is stimulated. If the equipment value is less than 30% of the company profit, then the innovative companies have the possibility to reduce their taxation base.

In some countries other methods are used by the state for support of the innovative companies: tax credit, export financial guarantees, moderate protectionism etc.

In the developed countries the state is a main donor for applied science, especially in the branches, associated with the Military-Industrial Complex (MIC). Having in mind that the achievements there are quickly transferred in the civil field, this spreads the necessary stability in many innovative companies.

Another way for innovation support in the developed countries is the well arranged system of protecting the copyright. State bodies keep the interests of the small innovation companies, by guaranteeing them the due by law forthcoming realization in the market.

In recent time in the developed countries, a trend of activity is observed of the entrepreneurs' deals of innovators, coming from the universities. This trend is mainly included in the USA. Sometimes clashes of interests arise between the state financing of a number of developments and the private character of the obtained copyright. These conflicts are differently resolved in the different countries.

6. The role of foreign capital

A problem for our country is the quick and effective integration of its innovation structures in European ones and in the rest of the world. There are a lot of historically arisen obstacles on this road. Apprehension exists in presenting to the potential foreign partners the real state of the innovative company. Very often the managers of the company cannot prepare the respective firm documentation and the

realized innovation in a form, necessary for accomplishing adequate partnership and receiving specialized innovation credits. This is very often a result of lack of good enough economical and innovation literacy, as well as of inefficient organizational activity.

The real situation in our country is such that even foreign TNC, which by privatization contracts have bought large Bulgarian enterprises, do not invest for generation of innovations in our country, and they are satisfied by innovation technologies transfer from the countries where they are mainly located. This, to some extent, makes senseless the activity of creating specialized scientific potential in the respective branch. Competent and careful intervention of the state is necessary in these processes.

The lack of large-scale, oriented to innovations Bulgarian TNC hampers the participation of our scientific organizations in European and other projects where sharing of risk and co-financing by a reliable enough Bulgarian economical organization is needed. The processes of creating innovatively oriented joint Bulgarian and foreign economical organizations is slowly realized

7. Characteristics and requirements towards the financial system

In spite of the fact that the Bulgarian financial system is well integrated in the European one, it cannot be claimed that it actively supports the innovation activity in our country. The main weakness derives from the fact that very few Bulgarian innovative companies are capable to go to our fund market which is not yet stable enough.

The fund market in the developed countries becomes a still more considerable source for investment for the small innovative companies. For example, in US at the beginning of 2004, thirteen companies have passed the IPO procedures with total amount of 2.8 billion US\$. By selling shares they accomplished efficient emission financing of the companies. Anyway, this financing resource is not available to all companies even in the US – the price of the company should be not less than 20 million US\$. Due to this reason the IPO financing is used by not more than 20% of the innovative companies.

In the UK the so called “alternative fund market” is used, on which the innovative companies may get financing through a simplified procedure even at the early stage of development of the innovative idea. The company issues a project with the main ideas and the technologies by which they would be realized. The project passes through a review and approval by an expert council. As a whole the “alternative fund market” has lowered requirements compared to the normal one but this facilitates smaller innovative companies to find accessible financing.

Attempts are made in many countries the bank system to be more actively involved in innovation financing but as a whole these efforts don't seem to be successful. The cause is that innovations are connected with considerable risk which results in high interest rates. They cannot be paid off by the innovative companies.

Very often high risks are partially undertaken by state owned or state-private guarantee funds which in practice average the risks between the many potentially

successful or unsuccessful innovative projects. No one can do this better than the created especially for the purpose venture funds.

Venture funds have arisen and received extremely broad application in US in the last few decades. They can be state owned, state-private and private. Their management is assigned to teams selected by a tournament that are paid depending on the final market result of the innovation being implemented. Their representatives take part in the innovative company management at all stages of the innovations realization. The venture funds as a rule successfully diversify the risks between the different innovative projects guaranteeing thus sufficiently high average profit of the fund.

In the developed countries there are set up networks of venture funds, specialized in different innovation areas. A venture fund of these funds is build so that they are separately guaranteed against crucial failures, and which smoothes over the risks between them.

In our country the venture funds have not achieved significant application – there is no relevant legislation and practical experience in their application. Something more – the scientific and economic circles have not still begun a serious discussion about the possibilities of successful application in our country. Nevertheless this efficient method of financing the innovations will make its way in our country.

8. Conclusion

It follows from the exposition, although it is brief, that even though approved good practices exist, serious delay is observed in our country in the area of innovation. This is also complicated by a series of unsolved problems at state level. There are not any: a) national programs approved at parliamentary level for the economic development; b) national council for science and technologies at the Council of Ministers or at President; c) the necessary intentional financing of science and innovations by the state and mostly by business; d) effectively functioning funds for support of science and technologies, and particularly venture funds.

The delay in the innovations is inevitably accompanied by delay in economy. Both can be overcome mainly by efficient support of the innovations.

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Эффективная поддержка инноваций

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(Резюме)

В работе обсуждаются процессы в области инноваций в разных странах мира, и более подробно – в нашей стране. Рассматриваются подходы в научном и финансовом аспекте, которые поддерживают появление и внедрение инноваций. Представлены специфические проблемы болгарской экономики и их влияние на развитие инноваций. Предлагаются некоторые хорошо известные и высоко эффективные финансовые модели, которые применяются в экономической реальности развитых стран.