

INNOVATIONAL DEVELOPMENT OF THE REPUBLIC OF MOLDOVA AND ITS ECONOMIC GROWTH OPPORTUNITIES

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Abstract: Criza financiară începută în anul 2008 a redus considerabil pe termen scurt disponibilitatea companiilor de a investi în inovații. În timp ce la mod general, investițiile în inovații au scăzut considerabil în timpul crizei economice, o mică, dar semnificativă minoritate de întreprinderi, „înoată contra curentului”, astfel sporind nivelul investițiilor. Din punct de vedere alternativ, ele sunt considerate firme inovative cu un grad sporit de competitivitate care nu au fost neapărat implicate în inovații înaintea crizei. Respectivetele întreprinderi ar putea fi mai mici ca mărime sau unele complet noi care exploatează criza pentru a concura pe segmentele de piață a companiilor high-tech.

Introduction. Subject of the innovative RM development applies to all types useful for the human society - not only economic but also non-economic - as directly related to the economy so positioned far away from it. In fact, it is a comprehensive development of the society on the basis of a wide variety of content and nature of innovation. Therefore, a comprehensive discussion of the innovation process in society, especially in the international and national aspects is a difficult task and goes beyond the object of economic science. All other disciplines and activities can find and identify the specific perspectives of their interests in this area.

The task is to identify and research the characteristics of qualitative features of the present stage of innovation development. These are the features to look for the essence of the current stage of the innovation process and the national country-specific manifestations of it, including its degree of development in the global crisis.

The international community is now turned into a stage of economic development, which is called "an economy based knowledge." And it is the inevitable path of development. Therefore, special attention is needed not only for funding their own knowledge, but also for the transformation of knowledge into effective production.

Methodological and practical issues. The basis of the financing of new technologies, new industries, new economies of venture capital. The volume of venture capital is not so great in comparison with investment funds of the world economy, but it is very important for the successful development of the technology-oriented countries. This is confirmed by the fact that almost all firms in the top hundred of the largest companies, rose to their feet by this venture capitalist.

The global financial crisis will have an ambiguous effect on the market for venture capital investment. On the one hand, in times of crisis the existing venture capital funds have new opportunities:

First, it will not create new funds and, hence, competition will decrease.

Second, the assets are now much cheaper, about 30-50% - for projects at the stage start-up, venture capital is virtually the only option for financing. In this case, the

vector of preferences for the venture capital investors will be replaced with social networking and other Internet start-ups at start-up companies that offer interesting solutions in consulting, services and goods market. Especially the winner, perhaps the producers will import technologies that reduce costs.

Third, private equity buys today in the eyes of investors is particularly attractive, they will not seem nearly as risky amid falling stock market and better prospects of open mutual funds and deposits of commercial banks. Venture capital funds are invested in securities of non-public companies, which were not so much affected by the financial crisis.

On the other hand, the attractiveness of venture capital investment can be declined. People who previously invested in them actively, until now had no risk. On the contrary, everybody wants to go to the most secure assets. In a crisis, the project is more difficult to coincide with the planned indicators: less demand for its products or services. And if the project did not go on a self-sufficient level, and could not find the additional investment, it will simply cease to exist.

Trends in the market are now expected twofold: investing in companies that are able to profit or are already profitable, and reduce private investment and increased government money on the market. Such situation will continue until the global economy begins to show signs of recovery, as investors again will show liquidity. Funds will be closely following the development of companies from their portfolio.

At the present time, in front of VC funds are hard questions. The first of them - whether it is necessary today to continue to create its own industry of venture investment in the RM? Another important issue is the mechanism of diversification of risks in the financing of the innovational projects. And is there an alternative placement of free funds on deposit in banks? Very difficult issue is the choice and the options for the venture capital investment and identification of the most promising areas of innovation for the venture capital investment. All these topics can only be resolved with the participation of the state.

In this context, the RM on the basis of the foregoing, came to the following conclusions:

- 1) Venture financing in the RM is at an early stage of development;
- 2) The current situation is characterized by both positive and negative factors;
- 3) Venture funds provided a stable economic situation, emerged and regained their value and show a positive result.

In order for the venture capital business to acquire significant scale in our country, it is necessary to solve the following problems:

- ✓ A small company has become larger and provide income to investors through share issue (incorporation).
- ✓ Moldovan stock market is not ready for this, but the market participants are willing to appear on the market for the new securities that are issued and are not monopolies but commodity companies, who will be the main buyer in the RM. If there is no demand on the market, then firms will not be funds for further development, and hence the business venture will not develop.
- ✓ Demand for the shares will arise only when the ideas will turn into a specific liquid product that will sell well and generate good income. And there are problems:
 - a) the volume of effective demand in the RM is low, and high-tech products, as a rule, are rather expensive (at least initially),
 - b) in the RM there is no system of commercialization, and its alignment is more than a decade long.

In addition, the development of the venture capital industry in the RM hampered today following factors: poor infrastructure, providing a fruitful mutually beneficial cooperation with venture capital to small and medium enterprises, the lack of significant

Moldovan sources of venture capital, low liquidity risk capital, lack of economic incentives to attract venture capital to implementation of high technology projects, the low prestige of entrepreneurial activity in the small high-tech business, weak support for the venture business information, lack of qualified managers of innovative projects, including ongoing with the involvement of venture capital, etc.

The global economic crisis has had a negative impact on the development of venture business in the RM, which will help to overcome the experience of foreign countries. Finding themselves in situations of crisis, investors tend to change the strategy of business management, applying the following measures:

- ✚ refocusing of investment activity with the earliest and therefore riskier stages of venture financing later, related to the support of the already established and operating companies that have not had time to implement the issue of its shares;
- ✚ search for the new areas for venture capital, including long-term projects aimed at developing the latest scientific and technological advances;
- ✚ using in some cases venture capital funds for buyout and change management for those firms that are having problems with the implementation of already planned business plan;
- ✚ shift of operations to ensure liquidity of investments made before the stock market in the direction of corporate mergers and acquisitions;
- ✚ lobbying additional measures to promote venture capital from the state (tax rate reduction on capital gains from securities transactions or engaging in large-scale new sources of venture capital, including pension funds).

The state plays a prominent role in overcoming the crisis in the venture capital market in the industrialized countries. Their implemented actions are quite varied and in many respects similar to the mechanisms of support used in the early stages of this market.

Successful activity of venture capital funds provides an incentive for large-scale arrival of private investors, including commercial banks, pension funds, insurance companies, financial-industrial groups on the venture capital market. Bankers, according to experts, will begin with the implementation of mediation services, assuming their customers are ready to start business again, and venture capital funds that wish to invest. Banks may also take on project preparation, and then - part of the risk and will increasingly become involved in this business more and more.

In addition, improving the investment climate in the RM will bring the total harmonization of legislation and will ensure stability, will promote standardization and protection of intellectual property, copyright, trademarks, creating a system to help protect these rights, innovative entrepreneurship.

So far, one of the main problems of the national economy is insufficient investment resources, especially foreign ones. Moldova has labor and intellectual resources, farmland, etc., but lacks the financial resources necessary for their effective exploitation.

A significant contribution to achieving strategic investment is the investment climate, is characterized by a number of political, social, economic aspects. Any investor, especially foreign one will start with market research analysis of macroeconomic indicators that characterize the investment activity of the country or region where they intend to invest resources. If the investor does not want or cannot reasonably be required to independently assess a country's investment climate, he may appeal to different studies rating agencies and specialized publications. There are well known countries where investment climate ratings and the degree of investment risk are being regularly published in the economic magazines such as Euromoney, Fortune, The

Economist, and the ratings issued by recognized rating agencies - Moody's, Standard & Poor's, IBCA etc.

Analysis of the main (current prices) investment activity in Moldova in the period 2001-2009 shows an acceleration of it until 2008, and later registers a decreasing trend. Evolution of the gross fixed capital formation from 2001 to 2008 describes an increasing trend from year to year, registering in 2008-21391000000 to 3.19 billion lei in 2001. This increase is due both 6.7 times increase consumption (household income increased), as well as in investment. In 2009, on the background of a deepening economic crisis and political instability, values significantly reduce the main macroeconomic indicators, as in 2010 was registered a slight increase, but it is below the level of 2008.

An investment quality of macroeconomic processes is revealed by the dynamic evolution of the share of investment in fixed capital in GDP composition (Figure 1).

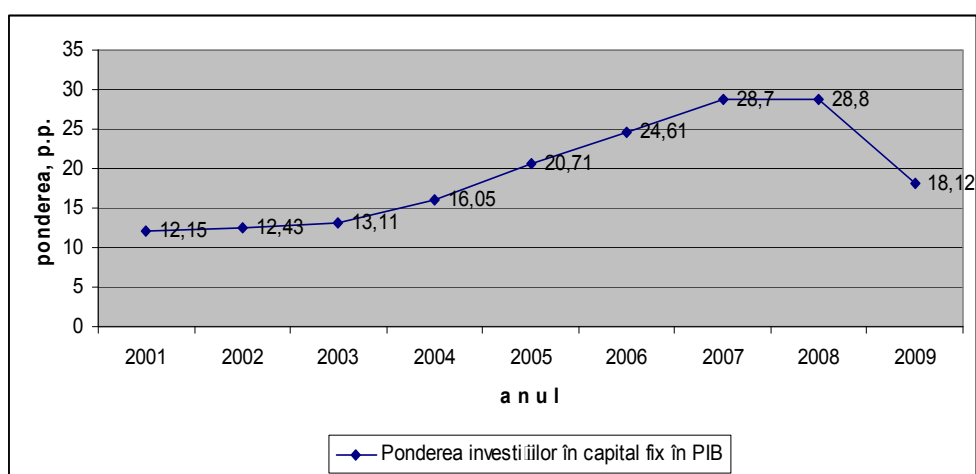


Figure 1. The share of investment in fixed capital in GDP during 2001-2009.

Source: date of National Bureau of Statistics of the Republic of Moldova

As we see the last 5 years GDP growth was sustained in a greater fixed capital investment than the growth in 2001 - 2004. Even in 2009, this indicator is larger than in 2004. This factor is considered important for sustainable national economic growth. In 2010, according to preliminary data of the NBS of Moldova the value of this indicator constituted 18.0%.

Another qualitative indicator of the evolution of investment processes in the national economy is the ratio of gross fixed capital formation to GDP and it is considered a relevant indicator for comparative analysis of investment attractiveness of countries in a regional context. A country is considered more attractive to investors, if this ratio is higher and considered to improve the structure of GDP. Medium and long term, an investment component will cause a high GDP growth of the country concerned and the living standards of people in this state. And it ends with a series of favorable positive social and economic phenomenon: the reduction of labor migration, the growth of foreign investments, etc.

Since 2008, the evolution of this indicator registered a downward trend, reaching in 2009 to 22.5 percentage points, virtually as in 2004. This indicates a decrease in the volume of investments by economic entities in the purchase of durable goods, which will lead to a negative impact on sustainable economic growth in Moldova in the coming years. In 2009 the share of gross fixed capital formation decreased from 2007 by 7.7 percentage points.

However, in recent years Moldova has grown active development of innovative

structures designed to provide innovation projects and technology transfer throughout the entire lifecycle: from creation of new technology or new product prototype and manufacture products organization innovation and to conduct marketing activities and marketing. In the years 2007-2009 under the aegis of the Academy of Science were created three scientific-technological parks, including a scientific-technological "Academic" specialized parks: the ecology and intensive agriculture "Inagro" on the field of micro and nanotechnologies "Micronanoteh" innovation incubator "Innovator". Residents of these structures made innovation and technology transfer projects focused on the following areas: the creation of renewable energy, agriculture, biotechnology, electronics, nanotechnology, environment, construction, etc.

Thus, the long-awaited turnaround in the direction of financial innovation business has occurred. However, the analysis identifies a set of measures implemented by some degree of imbalance, as a stimulus for accelerated development of the venture capital sector has received only to be oriented to the formation of small, innovative companies, start-ups with the already completed research and development, adjusted production of finished goods and consumer markets. In a virtually unreached sector remain small, innovative companies, "seed" stage. "Seeding" project - a business formed when its production is just being created, actively conducted research and development, market prospects are not fully clarified product, and the risks of the investors are at their highest point. By the continuity of the investment cycle it is necessary that the country has always had "sown" innovative enterprises capable of growing in market conditions. Moreover, there must be a large pool of them, because, in practice, only a small fraction of them will be able to become commercially attractive start-ups.

The latter, in turn, through the support of venture capital funds, may enter into the sustainable level of profitability and to gain leadership in their markets (though a small number of firms is able to do again,). Thus, in order to appear in the economy even more powerful and profitable innovative companies, there must exist a sufficiently large number of "Seed" projects.

Therefore, to enhance the innovative segment of the economy, it is necessary to provide financial support to a large number of projects on the "seed" stage at the same time. According to international practice, to get the old-an, of commercial interest for venture capital it is necessary to finance the 10 "crop" projects. According to the American business angel network Alliance of Angels, one of the 10 who applied for the financing of innovation projects receive a business angel investing, while venture capital gets 1 out of 10 projects funded by business angels.

In the USA - in the most prosperous in terms of developing country innovation system - "crop" sector is largely financed by private investors - business angels. For example, according to the Center Venture Research at the University of New Hampshire in the U.S. annual discounted business angel investment is around \$ 25 billion, which is comparable to the volume of venture capital investments in start-ups (about 23-26 billion dollars). These statistics do not cover all the business angel investment in the sector, and according to expert estimates, the annual total volume of business angel investments in the U.S. exceeds the amount of venture capital investments in the 2-3 times. Even the order of 7-7.5 billion dollars annually goes to the "seed" projects under the SBIR program (Small Business Innovation Research - Research and innovation of small businesses), SBTR (Small Business Technology Transfer - Technology transfer for small businesses) and CCC (Certified Capital Company, a program certified company). On average, one year consists of less than 4,000 venture capital investments, while business angels - 40-50. 700-800 venture funds account for about 225 thousand business angels.

One of the areas of "seed" funding may be the creation of co-investment of public funds with business angels. For example, in the London area business angels have the ability: to draw a project within the framework of co-investing up to 465 thousand British pounds (100 thousand for the first round) by the London fund "seed" capital (London Seed Capital Fund), or draw from 0.5 million to 2 million pounds through a public-private Seraphim Capital Fund.

In Sweden, the fund "seed" STING Capital program exists for embryonic company. This program combines funding from government, business angels, venture capital firms, non-institutional investors. The purpose of his work, to solve the problem of lack of capital for nascent companies in the Stockholm region and to give a chance to the high-tech start-up companies to develop until the later stages at which they are able to attract more traditional financing from investors among venture capitalists.

In the past few years, the foundation (to) investing have appeared in Belgium, the Netherlands, Germany, France and many other countries.

Another factor stimulating the sector of small innovative companies from early stages of demand for their products, may be to enhance communication between them and large corporations. Nowadays, a tendency for increased activity of transnational corporations such as, Intel, IBM, Shevron, Shell, Boeing big companies in the defense industry cooperation and collaboration with small innovative businesses, and even the provision of funding from major corporations. This is due to structural changes in the innovation market, when the most of the scientific developments created and commercialized in small innovative companies, some of which quickly become leaders in their respective markets. In this situation, large companies are forced to track innovation and development which may affect their position in the market and use them to strengthen their position in the competition.

Conclusions. In view of the above the following activities are invited at the state level that would help accelerate the development of innovative small businesses in the early stages of development:

- ✚ to work to support and develop the business angel sector, private sector investments in seed stage - at the expense of creating favorable conditions for the transition to the sector of capital from other sectors of the economy through the formation of adequate task of regulatory, legal, fiscal and image conditions;
- ✚ deploy a new state program aimed at financing small innovative companies on the early stages of development, including through the establishment of government and public-private fund "seed" investments, the implementation of co-investment with business angels and venture capital funds;
- ✚ to implement measures aimed at encouraging large corporations to invest in small innovative companies early stages through the creation of joint funds "seed" investments, as well as place orders for small innovative companies.

The implementation of the above list of measures should lead to balanced development of the innovation sector and lay the foundations for the emerging knowledge economy.

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