

## MECHANISMS FOR STIMULATING INNOVATION AND TECHNOLOGY TRANSFER IN THE REPUBLIC OF MOLDOVA



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### Introduction

IT IS KNOWN THAT THE EFFECTIVE FUNCTIONING OF RESEARCH-INNOVATION SYSTEM DEPENDS ON THE KEY FACTORS: POLITICAL, ECONOMICAL, SOCIAL. EVERY FACTOR HAS IT'S SPHERE OF INFLUENCE ON THE RESEARCH-INNOVATION SYSTEM, THAT'S WHY ARE NECESSARY THE MECHANISMS FOR THE STIMULATION OF THE SYSTEM. THE FIRST IS REPRESENTED BY THE STATE POLICY IN THE SPHERE OF RESEARCH, DEVELOPMENT AND INNOVATION, WHICH MEANS ADOPTING THE LAWS FOR INCOURAGING AND STIMULATING INNOVATION CAPACITY OF THE COUNTRY.

In Republic of Moldova in 2004 was adopted the Science and Innovation Code. This Code governs legal relations pertaining to the development and promotion of State policy in the sphere of science and innovation, scientific research, innovation and technology transfer, of scientific-technological information, accreditation of organizations in the sphere of science and innovation, attestation of scientific and scientific-pedagogical personnel of

higher qualification, protection of intellectual property, the legal status of the subjects of science and innovation. This normative act changed the construction of the system and initiated a new way of developing the innovative system in our country. The most important things that were changed when the code entered into force were that Academy of Science was named as the responsible institution for developing the research and innovational system, also were created some new institutions, like Agency for Innovation and Technology Transfer (AITT), Agency on Intellectual Property (AGEPI) and National Council for Accreditation and Attestation (CNAA), that were directly involved in developing the system.

Agency for Innovation and Technology Transfer was founded on October 29, 2004, with the main objective to coordinate, stimulate and implement the mechanisms of innovation and technology transfer in Moldova. In order to coordinate, stimu-

late and implement the mechanisms of innovation activity and technology transfer the Agency performs the following functions:

- Implementation of the state policy in the sphere of innovation and technology transfer;
- Defining main directions in the sphere of innovation and technology transfer, in terms of different programs and projects at all levels;
- Participating in establishing partnerships between different organizations in the sphere of science and innovation, higher education institutions and production units;
- Coordinating the process of creating infrastructure in the sphere of innovation and technology transfer;
- Offering specialized assistance in the sphere of innovation and technology transfer.

The Agency for Innovation and Technology Transfer is the only institution of this type in Republic of Moldova, so that we are trying to do everything possible to harmonize and approximate our legislation. The Agency has contributed each year to the elaboration and implementation of legislative strategies in order to promote and further develop the innovation sector of the Republic of Moldova.

Latter, in 2007 was adopted the Law on Science and Technology Parks and Innovation Incubators, which regulates the legal status of the organization and functioning of the scientific-technological parks and innovation incubators. The purpose of this law is to stimulate the activities of innovation and technological transfer aimed to transform the results of scientific researches and innovations in products, services, new or improved processes.

Partnership Agreement between the Government and Academy of Science of Moldova is another legislative act that directly regulates the innovational system. The partnership agreement is negotiated every 4 years in order to provide all the aspects for develop an effective and modern innovational system. In the same time, this act regulates the financial aspect of innovational and technology transfer projects and determine the most important fields of the projects, in accordance with society needs.

In order to the regulations of presented laws was elaborated the Innovation strategy of the Republic

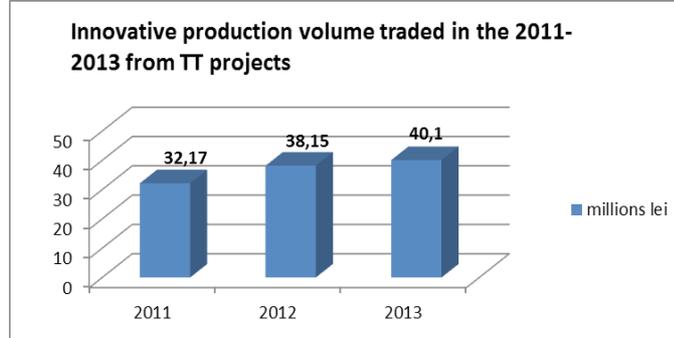
of Moldova for the period 2013-2020 "Innovations for competitiveness". It is a specific strategic document on innovation in Moldova. This strategy defines the vision, objectives and measures for developing innovation activities in the Republic of Moldova. The overarching aim is that innovation should contribute to achieving a sustainable and competitive in the knowledge-based economy. The strategy assesses the current situation and the development potential in the area of innovation. It includes an analysis of strengths, weaknesses, opportunities and threats, and identifies innovation strategic priorities. The main innovation policy makers of the Strategy are the Academy of Sciences and the Ministry of Economy.

With the introduction of a long-term strategy for innovation and competitiveness (2013-2020), the government aims to achieve a more stable and predictable economic growth of the country focusing heavily on innovation. The strategy aims to achieve by 2020 a production of innovative goods that would account for 25% of the GDP. To reach this ambitious target, Moldova has to turn to a new model of sustainable growth, which would facilitate investments and would be export-oriented. There is the need in a diversification of exports, a reduction of the share of primary goods in the export structure and increase the level of high added value products, including science intensive products.

As regards the import and export of innovation products, there is no precise statistics at the national level. Since the AITT is the only national agency that deals with the promotion of innovation, in the tables below is presented the data regarding the 2011-2013 technology transfer projects and those within the innovational structure (Science and technology parks and business incubators).

The last three years, we had a constant positive trend in the commercialization of innovative products and this trend has been positive since 2005 when AITT funded the first projects. In 2011, the Agency funded 25 technology transfer projects. With an input of 7.35 mln lei (≈\$639000) we attracted additional 7.82 mln lei of co-financing and the output, which is measured by the monetary equivalent of the goods commercialized in the same period, amounts to 32.17 mln lei (roughly \$2.8 ml

**Diagram 1**

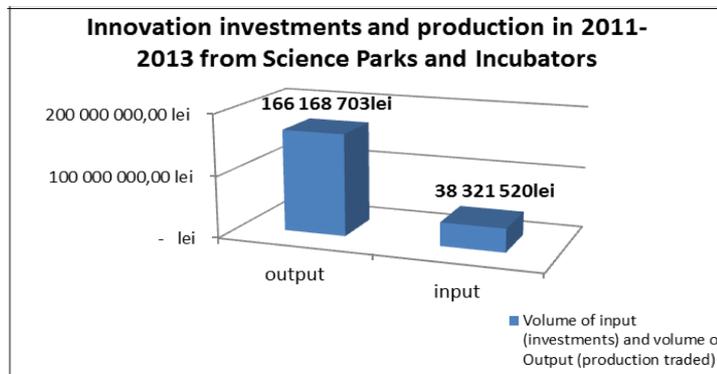


In 2012 we observed an increase in the volume of innovative products traded on the market of about 18.6%, that reached the sum of \$3,127 mln. This figure becomes even more significant if we take into account that the funding from the agency decreased by 5.5%. What is encouraging for the future development of these initiatives is that we see an increase in other private funds attracted by innovative projects. In this particular case, there was 20% more co-financing over the previous year. During 2013 we saw some further improvements with a higher rate of the innovative production volume traded and again a higher rate of attracted funds but for the third consecutive year, the funding from the agency declined slightly. These positive results are showing that there is a great potential in TT projects and with a higher budget we could develop further this activity.

Another source of commercialization of innovative products is the residents of our science parks and business incubators. In this case, over the last

three years the investments in innovational infrastructure reached an overall of \$3 mln, but in this case the funds from the AITT budget are considerably lower. In 2012 the allocation for business incubators reached almost 3 mln lei while the residents invested additional 36 mln lei. The Agency's activity in this direction is not limited to funding the infrastructure but offers also other services to the residents, such as innovational marketing. Another service that aims to promote innovative products refers to participation in various trade fairs within the country and abroad. The full picture of the last three years shows that compared with a total investment of 86.2 mln lei, we have obtained a volume of commercialization of innovative products amounted to 276.589 mln lei. These data tell us that innovation products have a big value added and in return of a modest investment can bring great benefits. Supporting tools for companies investing in innovation can be improved further but with no doubt this is the path to follow in the future.

**Diagram 2**



At the moment, responsibility for innovation policy is mainly split between the Moldovan Academy of Sciences and the government bodies, especially the Ministry of Economy. The Ministry of Economy coordinates economic development policies across the various ministries, public organizations and industrial associations. It oversees the implementation of actions for accelerating economic growth and for enhancing competitiveness. At the same time, most practical aspects of innovation policy are dealt with by the ASM. Unfortunately coordination between the ministry and ASM is rather weak. The ASM governing bodies include only scientists. Consultative bodies of the ministry, on the other hand, do not include ASM representatives, who are responsible for innovation policy in the country.

Overall, the Moldovan innovation governance is highly centralized. Policy formulation and priority setting, as well as policy implementation and evaluation are concentrated in the ASM. The centralized system ensures continuity of the funding stream and provides stable priorities for pursuing long-term research. There is an obvious risk that such an innovation system is not very efficient and slow to respond to emerging topics. Furthermore, cooperation between public and private research institutions depends fully on the Academy's actions. The low level of participation of the private sector in the governance of the Academy of Science, and in innovation activity in general, means that the academy has only limited feedback from companies on the effectiveness and relevance of its activities and policies.

#### REFERENCES

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#### ABSTRACT

##### **Mechanisms for stimulating innovation and technology transfer in the Republic of Moldova.**

Innovation is a challenge of modern society, which aims to improve the quality of human life and in the meantime to use limited resources. Implementation of new technologies and innovation plays decision-making role in: economic and social development, enhancing productivity and competitiveness, better quality of life. In the vision of authors, for the economic growth of the country, the sphere of science and innovation policies must provide the effective implementation of the mechanisms for stimulating innovation and technology transfer.

#### REZUMAT

##### **Mecanisme de stimulare a inovării și transferului tehnologic în Republica Moldova.**

Inovarea este o provocare a societății moderne, care are scopul de a îmbunătăți calitatea vieții umane și, totodată, de a utiliza în mod eficient resursele limitate. Implementarea noilor tehnologii și inovații influențează asupra adoptării deciziilor privind dezvoltarea economică și socială, creșterea productivității și a competitivității, ameliorarea calității vieții. În viziunea autorilor, pentru a asigura creșterea economică a țării, este necesar ca sfera științei și politicilor inovării să prevadă implementarea efectivă a mecanismelor de stimulare a inovării și transferului tehnologic.

#### РЕФЕРАТ

##### **Механизмы стимулирования инновационной деятельности и трансфера технологий в Республике Молдова.**

Инновационная деятельность – это вызов современного общества, целью которого является улучшение качества человеческой жизни, а также эффективное использование ограниченных ресурсов. Внедрение новых технологий и инноваций влияет на принятие решений о социально-экономическом развитии, рост производительности и конкурентоспособности, улучшение качества жизни. По мнению авторов, для обеспечения экономического роста страны необходимо предусмотреть в сфере науки и инновационной политике эффективное внедрение механизмов стимулирования инновационной деятельности и трансфера технологий.