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Innovation policy in the Republic of Moldova and its impact on business development

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Abstract. In the context of the increasing role of the SMEs sector in the national economy landscape, supporting innovation activity in SMEs is imperative. In this paper our goal is to review the main policy documents on innovation, with reference to the measures aimed at stimulating innovation in SMEs; summarize the characteristics of the innovative SMEs in the Republic of Moldova. Additionally, there has been outlined the constraints faced by the participants of the technology transfer process - enterprises, researchers and intermediary institutions, based on the interviews carried out with the participation of the authors. We also examine the Republic of Moldova position in the international rankings, referring to the innovational development. The article identifies that the innovation activity is still underestimated in the Republic of Moldova, the encouragement of the innovation activity is not systemic, having a fragmentary character, with a low impact on business community.

Keywords: innovation, innovation policy, SMEs, research and development

JEL Classification: O 20, O 30, O31, O38

The importance of the SMEs sector for the national economy. Entrepreneurial activity plays a major role in the country's social and economic development: enterprises produce goods and services, create jobs, revenues in the state budget, generate innovations and ensure economic growth and the welfare of citizens. A considerable role is played by the SMEs sector. SMEs are essential components of the economy of a large number of countries, playing a particular role in the development of the countries, their share in the total number of enterprises being considerable. In the Republic of Moldova, as in most other countries, they represent a dominant part of the business sector and significantly contribute to the job creation.

Considering that in the Republic of Moldova, the majority of enterprises are related to the SMEs sector, the emphasis in the state policies, as a rule, is on the support of SMEs. Recently, a new law on SMEs, which provides for a number of significant changes in supporting SMEs, was adopted in 2016 (the Law no. 179 of 21.07.2016). The new law establishes the legal framework for micro, small and medium enterprises, as well as the state support measures for their creation and development. As stated in the recently established law in Moldova, small and medium-sized enterprises are defined according to three criteria: average annual number of employees, annual sales revenue and total annual balance sheet assets.

Enterprises belong to the SMEs sector if they cumulatively fulfill the following conditions:

- have an average annual number of employees of up to 250;
- achieve an annual turnover (sales revenues) of up to 50 million MDL or hold total assets of up to 50 million MDL.

Depending on given criteria, the SMEs are classified into the following categories:

Table 1. Criteria for classifying enterprises in the SMEs sector

Size of SME	Number of employees, pers.	Sales revenue, MDL	million	Balance sheet assets, million MDL
Micro	0-9	≤9	or	≤9
Small	10-49	≤25	or	≤25
Medium	50-249	≤ 50	or	≤ 50

Source: based on the Law No.179 from 21.07.2016 on the Support of Small and Medium sized Enterprises Sector

In the Republic of Moldova, SMEs embody the most important part of economic agents, representing in 2016, according to the National Bureau of Statistics 98.7% of the total number of enterprises. Thus, SMEs account for approximately 30.5% of all enterprises registered in the State Registration Chamber.

The SMEs contribution to the national economy is an important one, with 61.2% of employees in the national economy working in SMEs in 2016. The SME sector generated 41.5% of the sales revenue and created 39.1% of the total profit before taxation, and the SME's quantitative impact on economic growth is estimated at 31.4 percent of GDP. The share of intangible assets of SMEs is still very low, making up 15.6%, which shows that the SMEs do not yet perceive and do not realize the importance of intangible assets components for their business development.

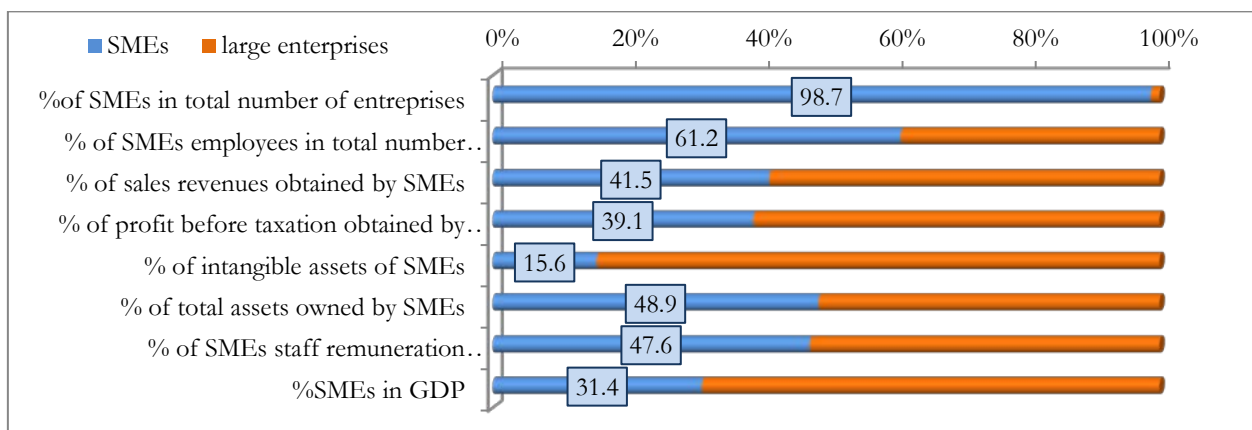


Figure 1. SMEs in the national economy of the Republic of Moldova in 2016, %

Source: Calculated by the authors on basis of the statistical data

86.3% of the SMEs are microenterprises, 11.2% are small enterprises, and 2.5% are medium-sized enterprises. There were 51.6 thousand SMEs in Moldova in 2016, up from 51.2 thousand in 2015, with a slight increase of 2.2%.

According to the statistical data, in 2016, in the SMEs sector worked 313.53 thousand employees with 3.4 thousand less than in 2015 (with a slight decrease of 1.1% compared to the previous year). Medium-sized enterprises, microenterprises and small businesses, employed almost similar number of employees, with a weight of 32.4-34.2% of the total SMEs workforce.

Regarding the turnover generated by SMEs in 2016, it was 124954.35 million MDL, with an increase of 4.7% compared to the previous year. Structurally, the largest share of turnover achieved in SMEs sector was obtained by the small enterprises (40.1% of the SME sector's turnover), followed by medium-sized enterprises and micro-enterprises, with a share of 33.0% respectively 26.9%.

Table 2. The main indicators of the SME sector, 2016

Indicators	Total number of SMEs	Medium-sized	Small	Micro
Number of enterprises	51626	1 299	5 780	44 547
% of total	98.7	2.5	11.2	86.3
Average number of employees, persons	313533	101 529	107 156	104 848
% of total	61.2	32.4	34.2	33.4
Sales income, MDL m	124954.35	41 303.67	50 079.32	33 571.36
% of total	41.5	33.0	40.1	26.9
Profit (+)/Loss(-) before taxation, MDLm	5878.53	2 101.29	2 229.81	1 547.43
% of total	39.1	35.7	37.9	26.3

Source: Calculated by the authors on basis of the statistical data

The analysis of innovative SMEs in the Republic of Moldova, based on statistical data. Today, when businesses and in particular SMEs, are marked by a fierce market competition, competitiveness depends more than ever on their ability to develop, implement and commercialize innovative solutions constantly. In order to remain competitive on a long-term basis, SMEs need to introduce new products / services on the market, permanently improving the quality of existing ones by applying new production technologies, etc. Knowing innovative business activities is very important for the economic measurement of innovation, for assessing its potential, efficiency and impact.

In the Republic of Moldova until recently it was not possible to analyze the activity of innovative SMEs due to lack of the statistical data. Starting with 2017, the National Bureau of Statistics has presented for the first time the information on business innovation activity in the Republic of Moldova for the years 2015-2016.

The information includes statistical data on business innovation by economic activities, size of enterprises, by development regions, referring to: the number and share of innovative enterprises, the typology of innovators, the ways in which innovation is achieved, the number and share of enterprises with new products for the market and new products for the enterprise, the turnover from innovation activities, investment in innovation activities, cooperation partners and their geographical location.

Thus, based on the analysis of this information, it was found:

- *Small and medium-sized enterprises are more innovative than large enterprises.* The share of innovative SMEs in total innovative enterprises in the Republic of Moldova in 2016 constituted 90%. Although the share of SMEs in the total innovative enterprises is significant, the share of innovative SMEs in the total SMEs in the Republic of Moldova is extremely small (only 1.2%). Thus, out of 51 626 SMEs, only 609 were innovative, which means that one of 85 small and medium-sized enterprises has been innovating.

- *Small businesses are more innovative than medium-sized businesses.* Small-scale innovative SMEs (employing 10-49 employees) had a share of 68.6% in the total of innovative SMEs, which is 2.2 times higher than the share of innovative medium-sized enterprises (31.4%). The same is true for both Industry and Services sectors. At the same time, innovative small enterprises prevail over the innovative medium-sized ones in almost all development regions, with the exception of the South region, where relatively more medium-sized enterprises (55.0% medium vs. 45.0% small) are concentrated. Although the number and the share of small enterprises in total innovative SMEs were higher (2.2 times), they achieved a turnover 1.4 times lower than the innovative medium-sized enterprises.

- *There are more innovative SMEs in Industry than in Services sectors.* Innovative SMEs in the Industry sector accounted for 52.4% of all innovative SMEs, 1.1 times higher than the share of innovative SMEs in Services (47.6%).

- *SMEs from Industry have earned higher income from innovation activity than SMEs from Services sector.* The turnover share of the innovative SMEs in Industry is 2.6 times higher than the share of the innovative SMEs' turnover in the Services, accounting for 72.4% and 27.6%, respectively, of the total turnover of the innovative SMEs. In the size class profile, medium-sized enterprises from Industry have obtained a 2.6 times higher turnover than small businesses, accounting for 72.1% and 27.9% of the total turnover of innovative SMEs of the Industry sector. In the field of Services, the situation is the opposite: the income from the innovation activities of medium-sized enterprises (22.1%) is 3.5 times lower than the income of small enterprises (77.9%) of the total turnover of innovative SMEs of the Services sector.

- The largest share of innovative SMEs is found in Chisinau municipality. Most innovative SMEs are concentrated in Chisinau (58.6%) and in the Center (16.1%) and Northern (15.1%) development regions. The Southern Region and ATU Gagauzia has registered relatively smaller share of 6.6% and 3.6% respectively of all innovative SMEs. At the same time, in all development regions, apart from Chisinau, the industrial SMEs dominate, and in Chisinau, the largest share belongs to innovative SMEs in the Services sector.

Given the fact that SMEs represent the most important part of the business sector, the modest results of the innovative SMEs demonstrate the need to further develop a stimulating economic and legislative framework for innovation at the level of all enterprises in the Republic of Moldova.

The main policy documents on innovation, referring to the measures aimed at stimulating innovation in SMEs. At the current stage of economic development, no enterprise, even more, no country can be competitive in the absence of the innovation activity. However, the innovation activity can only be successful with the existence of a legal and normative-legal framework well adapted to the conditions of the country. Thus, in the Republic of Moldova in the last years a series of laws and strategies have been adopted, aimed at stimulating the development and implementation of innovations. The main legislative acts aimed at stimulating the development and implementation of innovations are: The Code on Science and Innovation of

the Republic of Moldova, no. 259 of 15.07.2004; The Law on Scientific and Technological Parks and Innovation Incubators of 21.06.2007; The Law no. 138-XV of 10.05.2001 on the rationalization activity.

At the same time, the main policy document, which directly concerns the field of innovation, is the **Innovation Strategy of the Republic of Moldova for the period 2013-2020 "Innovation for Competitiveness"**. The strategy identifies 5 general objectives and aims to provide a framework of horizontal policies that will contribute to the enhancement of the international competitiveness of the country through the development of the human capital by strengthening the capacities of the Moldovan companies to absorb, generate and disseminate innovations and by a closer interconnection with the universities and research centers. The general objectives set out in the Strategy covers the following areas: A. The adoption of an open governance model of the research and innovation sphere; B. Empowering people with innovative skills; C. Companies' orientation towards innovation; D. Applying knowledge to solve global and societal problems; E. Stimulate the demand for innovative products and services (Government of Republic of Moldova, 2013).

In addition to the legislation and the basic documents, which directly address the sphere of innovation, there are a number of policy documents that reach to a certain extent the innovation field, of which the main are:

- The **Action Programme of the Government of Republic of Moldova for 2016-2018**, Chapter IV *The economic development, energy security, enhancing competitiveness and job creation* includes several objectives, among which Innovation and technological development. For achieving this goal are provided nine actions, including: providing access through a competitive process to state funding programmes in scientific research, technological development and innovation; developing a legislative support framework for innovative companies, including the Law on venture funds; reorganising and consolidating the National Agency for Innovation and Technology Transfer; enhancing innovative linkages between companies, educational institutions and research institutions; facilitating networking and technology integration of domestic and foreign companies; supporting the integration of innovators and Moldovan researchers in the global circuit of innovations and ideas; developing competitive financing tools for companies focusing on product, process, marketing and management innovation (Government of Republic of Moldova, 2016 c).

- The **Roadmap for improving the competitiveness of the Republic of Moldova** addresses the constraints that are considered to be of major importance for improving the competitiveness of the country, including human resources, access to finance, transport and energy infrastructure, quality infrastructure, information society, trade facilitation, fiscal policy and administration, *innovation and technology transfer*, competition. Among the objectives and actions referring to innovation included in the above-named document can be mentioned: Creating the legislative framework related to the innovation activities, linked to the European rigors; Company's orientation towards innovation; Adapting the formal training programs to the needs of the innovative development and supporting the young talents' entry into the innovation sphere; Strengthening the innovation links between companies, the education and research sectors, etc. (Government of Republic of Moldova, 2014)

- Some measures regarding the innovation activity are stipulated in the **National Action Plan for the implementation of the Moldova-EU Association Agreement for the period 2017-2019**: Supporting through various programs the capacity of SMEs to absorb innovative local technologies; Promote good technology transfer and innovation business practices by involving companies in international programs and projects in the field; Developing a network of innovation and business incubators; Facilitating the production and marketing of innovative and creative products between the parties; Elaboration of methodology and implementation of indicators on innovation statistics according to the EU requirements (Government of Republic of Moldova, 2016 a).

- In the **National Intellectual Property Strategy until 2020**, a central role is given to encouraging the creation, protection and use of intellectual property as a key tool in creating the conditions for the country's transition to the innovation model of economic growth.

- The **SMEs Development Strategy for the years 2012-2020** provides the long-term and medium-term policy framework for the development of the export-oriented sector, investment and innovation as well as the political commitment of European integration. One of the eight priority areas is aimed at *strengthening the SMEs competitiveness and encouraging the innovative spirit*.

Thus, *the Action Plan for 2015-2017 on the implementation of the Strategy* includes a number of objectives and actions, aimed at increasing the competitiveness of SMEs and encouraging the innovation activity. Among these, we mention only a few objectives: The improvement and development of technical and innovative

capacities of SMEs; Facilitating the development of the SMEs clusters, business incubators; Promoting intellectual property for the SMEs; as well as some actions: Grants to support SMEs in implementing energy efficiency projects; Expanding innovative infrastructure by creating and sustaining innovative incubators and scientific parks; Creating a communication and collaboration platform for intellectual property, creativity and innovation for SMEs at the “INFOINVENT” Exhibition (Government of Republic of Moldova, 2012).

Although the initial legislative framework was developed and some support institutions have been developed, the innovation activity is insufficiently sustained in the Republic of Moldova. First of all, in reality, the specific mechanisms and levers (regulations, instructions, government decisions, etc.) for the implementation of the legislation on innovation are not developed. The legislative framework is more declarative and there is no correlation between the main policy areas. There is no policy impact assessment and monitoring of the whole innovation process, and the first statistical data on business innovation activity occurred only at the end of 2017.

Moreover, the facilities stipulated in the Law on Scientific and Technological Parks and Innovation Incubators for the residents of these structures have been canceled without being applied. Thus, the tax and customs facilities initially promised to the residents were canceled by the Law on the scientific and technological parks and the innovation incubators. The mentioned facilities were canceled in 2012, but no residents ever benefited from them. This discourages business and investors from investing in this activity.

Secondly, the applied research activity is not predominantly oriented to increase the competitiveness, to the priority areas and the business and society needs. Thus the connection with the private sector is weak, these two develop separately from each other, limited to few possibilities, which can be achieved through the transfer of knowledge and, in some cases, through technology transfer. SMEs support measures and innovation incentives are developing as two independent processes, promoting and stimulating the SME sector without innovation. The innovation legislation is referring more to the innovative enterprises, which are resident of innovative infrastructure. Thus, the formal approach of stimulating the SMEs innovation activities can create a false impression of the intentions of obtaining the right privileges and benefits for innovative SMEs.

Thirdly, the development of innovation policy does not involve all the main actors interested in developing this important area. Moreover, the functions of development, implementation, monitoring and evaluation of innovation policy until 2017 were concentrated within a single institution - the Academy of Sciences of Moldova, which ultimately led to the inefficiency of this policy and to a minimal impact on the development of the SMEs sector. Thus, the encouragement of the innovation activity in the Republic of Moldova is not a systemic one, but it has a fragmentary character, manifested by the regulation of only individual segments of the entire innovation cycle and the minimal use of levers in the whole arsenal of incentive measures, existing in international practice.

The institutional framework for innovation. Aware of the need to improve the situation, in order to adopt a more open model, inclusive and transparent, in the Action Programme of the Government of Republic of Moldova for 2016-2018 was introduced the objective of *Reforming the governance of the national system of scientific research, technological development and innovation*. In order to achieve this objective, and based on the recommendations of the European experts, in 2017 was decided to reform the field of science and innovation in the country, focusing on increasing the efficiency in this field and increasing the impact of research and innovation on the national economy.

As a result of the reforms carried out in 2017, the main public authorities, which, according to their mandates, participate in the elaboration and implementation of the state policy in the field of innovation and technological transfer are:

- **The Ministry of Education, Culture and Research** - is responsible for policy development in the field of research;
- **The Ministry of Economy and Infrastructure** - is responsible for developing and monitoring policies in the field of innovation and technology transfer;
- **The National Agency for Research and Development** - is a new institution in the process of creation, set up by the merger of 3 organizations: the Research and Development Agency, the Agency for Innovation and Technology Transfer and the International Projects Center. The newly created agency is responsible for the implementation of the state policy according to action plans approved by the Government; the distribution of the budget allocations for R & D and innovation projects, exclusively on a competitive basis, according to the National Research and Development Program; the elaboration and presentation to the

Government for approval of the National Research and Development Program; monitoring the project implementation;etc (Government of Republic of Moldova, 2017 a).

- **The Academy of Sciences of Moldova (ASM)** - an autonomous public institution of national interest in R & D, will operate on the principles of self-management. The ASM will be a scientific consultant of the public authorities in setting the priorities in the field of fundamental and applied research and will have the following attributions: to elaborate the report on the state of science, reflecting the elaborated policies; to develop forecasts on the development of research and innovation fields, to organize the scientific events, etc. (Government of Republic of Moldova, 2017 a).

- **The State Agency for Intellectual Property** – the legal protection of intellectual property rights.

In addition, it is planned the creation of the Council for Research, Development, Innovation and Technological Transfer, which will deal with relevant expertise in the development of the science and innovation policy, will ensure the impartial intersectoral approach and will monitor the activity of NARDI. The council will gather outstanding personalities from various fields - representatives of the authorities, the Academy of Sciences and the civil society, and will be an advisory platform to develop guidelines for the development of research and innovation, providing advice and expertise (Government of Republic of Moldova, 2017 b).

A novelty is also the abolition of the obligation of scientific accreditation and the introduction of minimum performance criteria for accessing the budgetary financial resources, respectively the elimination of barriers for actors from other fields: the business environment and the civil society to participate in the research and development activities (Government of Republic of Moldova, 2017 b).

The evaluation of the innovative development of the country based on international rankings and other reports. National innovation efforts are highlighted in the international rankings, which tend to analyze and compare the innovation situation in different countries, the importance of innovation, especially for SMEs, by helping to formulate appropriate public policies for the given context.

In order to better understand the innovative development in our country in a global context, we will analyze the position of the Republic of Moldova in two of the most important international rankings - The Global Innovation Index and The Global Competitiveness Report.

In the **Global Innovation Index** in 2017, Moldova is ranked number 54 among 127 countries included in the ranking, worsening the position from the previous year with -8 points.

The lowest positions in the ranking the Republic of Moldova has obtained for the Innovation Effort Sub-Index (73rd place), in particular the Infrastructure (82nd place, a decrease with 7 positions), Business Sophistication (81st place in the ranking, improving by +8 positions), Institutions (72th place, a decrease with -4 positions). Within this sub-index, the Market Sophistication indicator showed a representative advance of +31 positions, moving from 93rd place (2016) to 62nd place (2017).

In the Innovation Output Sub-index, the country occupies a relatively better place (42), but in the last year it has worsened by -6 positions. All indicators that characterize this sub-index have worsened their positions, with the most representative downgrade recording the Knowledge and Technology output indicator (-21 positions).

The most advanced position in the ranking, Moldova has registered at the Innovation efficiency ratio (22nd place), which shows the top of the most efficient countries in transforming innovative ideas into practical results. This indicator reflects not the potential for innovation (in the Republic of Moldova, as in a number of other countries that has occupied advanced positions in the innovation efficiency, this potential is very limited), but the degree of using the existing potential. Although this index is the most advanced in the ranking for the Republic of Moldova, it also has a very negative trend (-18 positions). This shows us that the situation regarding the implementation of the innovations in the economy has been considerably worsened, and the country remains in the echelon of the economically less innovative and uncompetitive economies at the international level.

In this context, it is important to improve the work of all stakeholders involved in the innovation process - research institutions, entrepreneurs and public administration bodies. This implies, first of all, increasing the quality of scientific research institutions, which would lead to the increase of the Knowledge and Technology outputs indicator and a more active involvement of the public institutions, responsible for the elaboration, implementation and monitoring of the policies and mechanisms related to the innovation activity in the country.

Table 3. The position of the Republic of Moldova in the Global Innovation Index Ranking

Indicators	Position		The change
	2016-2017	2017-2018	
Total	46	54	-8
INNOVATION INPUT SUB-INDEX	74	73	+1
1) Institutions	68	72	-4
2) Human capital and research	51	59	-8
3) Infrastructure	75	82	-7
4) Market sophistication	93	62	+31
5) Business sophistication	89	81	+8
INNOVATION OUTPUT SUB-INDEX	36	42	-6
6) Knowledge and technology outputs	31	52	-21
7) Creative outputs	34	39	-5
INNOVATION EFFICIENCY RATIO	4	22	-18
Number of countries	128	127	

Source: Based on the Global Innovation Index Report

Moldova's position in the Global Competitiveness Report. The place of the Republic of Moldova on the global map of competitiveness remains modest, according to the results of the latest comparative evaluations. In the ranking of the Global Competitiveness Report in the years 2017-2018 Moldova ranked number 89 among 137 countries, the country advanced by +11 positions compared to the previous period and all the indicators that characterize the country's innovative development had a positive trend. It is important to underline that the improvement with 11 positions of our country in the ranking in 2017-2018 as compared to the previous year should be analyzed in the context of a considerable worsening by 16 positions of the Republic of Moldova in the previous period 2016-2017 compared to 2015-2016.

The innovative activity in this ranking is characterized by 2 pillars - P.9 Technological readiness (53rd place) and P.12 Innovations (128th place). Although at the Technological readiness pillar the Republic of Moldova is relatively well positioned (only due to the developed ICT sector), within this pillar the lowest position is recorded at the Firm-level technology absorption indicator (106th place). At the same time all the indicators that characterize this pillar have positive tendencies.

Referring to the Innovation Pillar, the country's position is lower than for the Technological readiness pillar, and the lowest among the 12 pillars, which characterize the country's competitiveness. An encouraging moment is the fact that, within the pillar, all indicators are showing positive trends in the last year, from +5 (Capacity for Innovation and PCT Patents) to +12 (University-industry collaboration in R&D). And only the Companies spending on R&D indicator remained unchanged, Moldova is on 135th place three consecutive years (2015, 2016, 2017).

Thus, it is very important, to reorient domestic research to address business challenges in order to improve the country's position on the Firm-level technology absorption indicator, to help develop closer ties between research and the business environment. With regard to businesses, it would be necessary to increase the R&D spending of companies and, as a whole, their innovation capacity, to increase the possibilities of enterprises to participate in the Government procurement of technology advanced products.

An important prerequisite for implementing innovations is to improve the access to finance for innovative businesses, through the creation of new support institutions (for example business angels) and the development of existing innovation incubators and scientific and technological parks, as well the provision of tax and credit facilities.

Table 4. The position of the Republic of Moldova in the Global Competitiveness Report

Indicators	Position		The change
	2016-2017	2017-2018	
Total	100	89	+11
Pillar 9. TECHNOLOGICAL READINESS	58	53	+5
A. Technological adoption	103	97	+6
Availability of latest technologies	95	88	+7
Firm-level technology absorption	112	106	+6
FDI and technological transfer	100	98	+2

Pillar 12. INNOVATION	133	128	+5
Capacity for innovation	124	119	+5
Quality of scientific research institutions	125	115	+10
Companies spending on R&D	135	135	-
University-industry collaboration in R&D	133	121	+12
Government procurement of technology advanced products	136	130	+6
Availability of scientists and engineers	131	120	+11
PCT patents, application/milion pop	77	72	+5
Number of the countries	138	137	

Source: Based on the Global Competitiveness Report

Moldova's evolution on the Innovation dimension of the SME Policy Index 2016, according to the OECD report "SME Policy Index: Eastern Partner Countries 2016: Assessing the Implementation of the Small Business Act for Europe". Starting with 2012, the OECD, every 2 years, conducts an assessment of the implementation of the Small Business Act, which shows the progress of implementing the 10 principles of the law and measures the convergence with EU practices and standards.

The assessment of the SMEs policies by the OECD has demonstrated that considerable steps have been taken in Moldova to establish a comprehensive framework for SMEs development. Moldova's evolution in most dimensions of the SME Policy Index 2016 shows a steady progress in several areas.

Thus, according to the mentioned OECD report, some concrete measures have been taken in recent years on the innovation ecosystem in cooperation with governmental agencies and other stakeholders. So, amongst the progress made in this area, the OECD report points to: financing instruments provided by the Innovation and Technology Transfer Agency in the form of innovation and technology transfer projects, and the establishment of scientific and technological parks and incubators (OECD, 2015).

Also, the Innovation Vouchers Contest, organized by the Innovation and Technology Transfer Agency in 2014, provided SMEs with the opportunity to acquire R&D services from knowledge transfer service providers, implement the acquired projects, and establish or strengthen the relationships with research institutions and international partners (OECD, 2015).

At the same time, according to the OECD report, the innovation ecosystem in the Republic of Moldova is confronted with a number of challenges, including: the average SME investment in R&D remains low; the collaboration between universities, research institutes, the private sector and SMEs is still poor; the policies, innovation strategies and action plans overlap partially with the Action Plan of the SMEs Development Strategy (OECD, 2015).

The evaluation of the constraints, faced by the participants in the technology transfer process - businesses, researchers and intermediary institutions based on the results of the National Institute of Economic Research. Since innovations are implemented in the business sector, including SMEs, then when evaluating the policies it is advisable to take into account the opinion of the most important participants of the innovation process: SMEs, public administration bodies, representatives of the research environment and intermediary organizations.

In this regard, in order to identify the main barriers of cooperation between SMEs and researchers in developing and implementing innovations, a series of interviews was carried out within the NIER, with the involvement of the authors. The reason for choosing the research method was that the level of innovation activity of domestic SMEs is quite low. This conclusion was confirmed several times by the results of previous projects, reflecting the limited participation of indigenous SMEs in the implementation of innovations. The results of the interviews largely confirmed the main findings of the reports and the analyzed policy documents.

Following the interviews, among the main constraints faced by the participants in the technology transfer process - enterprises, researchers and intermediary institutions, were mentioned (Aculai, 2009, 2010, 2014):

- difficulty in seeking employees with the required qualifications;
- insufficient financial possibilities, which are an obstacle for all parties;
- lack of information that could contribute to the implementation of innovations;

- insufficient awareness of the importance of cooperation by entrepreneurs and researchers, who are the main actors in the process of developing and implementing innovations;
- the complexity of finding the necessary partner, which comes to those entrepreneurs and researchers who are interested in cooperation;
- lack of economic incentives for scientists to initiate research, and for entrepreneurs - to implement innovations;
- lack of knowledge and skills of most researchers in promoting personal results on the market;
- high investment risk, related to the implementation of innovations;
- lack of a constructive dialogue between enterprises, intermediary institutions and public administration bodies;
- the respondents also noted that the legislation aimed at stimulating the processes of implementing innovations in enterprises is insufficiently elaborated. An example in this regard refers to the incubators created by universities, legislation not allowing the production and commercialization of products in such incubators. For example, the Incubator "Politehnica" within the Training and Technological Transfer Scientific Center in the Food Industry is able to train specialists in the dairy industry, to create new assortments, without the right to produce and commercialize.

Conclusions and proposals

The analysis has allowed us to conclude that the role of innovations as the driving force for economic growth and competitiveness is still underestimated in the Republic of Moldova despite the fact that the initial legislative framework has been developed and some support institutions have been created. SMEs support measures and innovation incentives are developing as two independent processes, promoting and stimulating the SME sector without innovation.

Overall, encouraging innovation activity in the Republic of Moldova is not systemic, but has a fragmentary character, manifested by the regulation of some individual segments of the entire innovation cycle and the minimal use of levers in the whole arsenal of incentive measures existing in the international practice.

All these have generated a number of proposals for improving the situation in the field, namely:

Regarding the improvement of the policy documents on innovation and SMEs

- Strengthen the coordination efforts between different innovation actors, as well as the monitoring and evaluation mechanisms in order to create a balance between policies, innovation strategies and action plans with the Action Plan of the SMEs Development Strategy;
- Review the Law on scientific-technological parks and innovation incubators and analyze the possibilities for providing incentives (tax, credit, customs, etc.) to residents of these entities.

Regarding the improvement of the research implementation results in SMEs

- It is necessary to stimulate the cooperation between research institutions and the business environment, as well as to encourage the commercial exploitation of scientific results, especially by SMEs, in this sense, it is important to promote widely in society, first of all, in the scientific and business community, the need to implement innovations, inclusive based on the results of scientific research;
- Elaboration of a special state program, focused on the innovative development of SMEs and destined mainly for the development of the necessary knowledge for entrepreneurs and researchers;
- Elaboration of a mechanism for identifying the needs of entrepreneurs in scientific research and innovation.

Literature

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