

Review of Research and Innovation in Moldova Background Report

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www.zsi.at

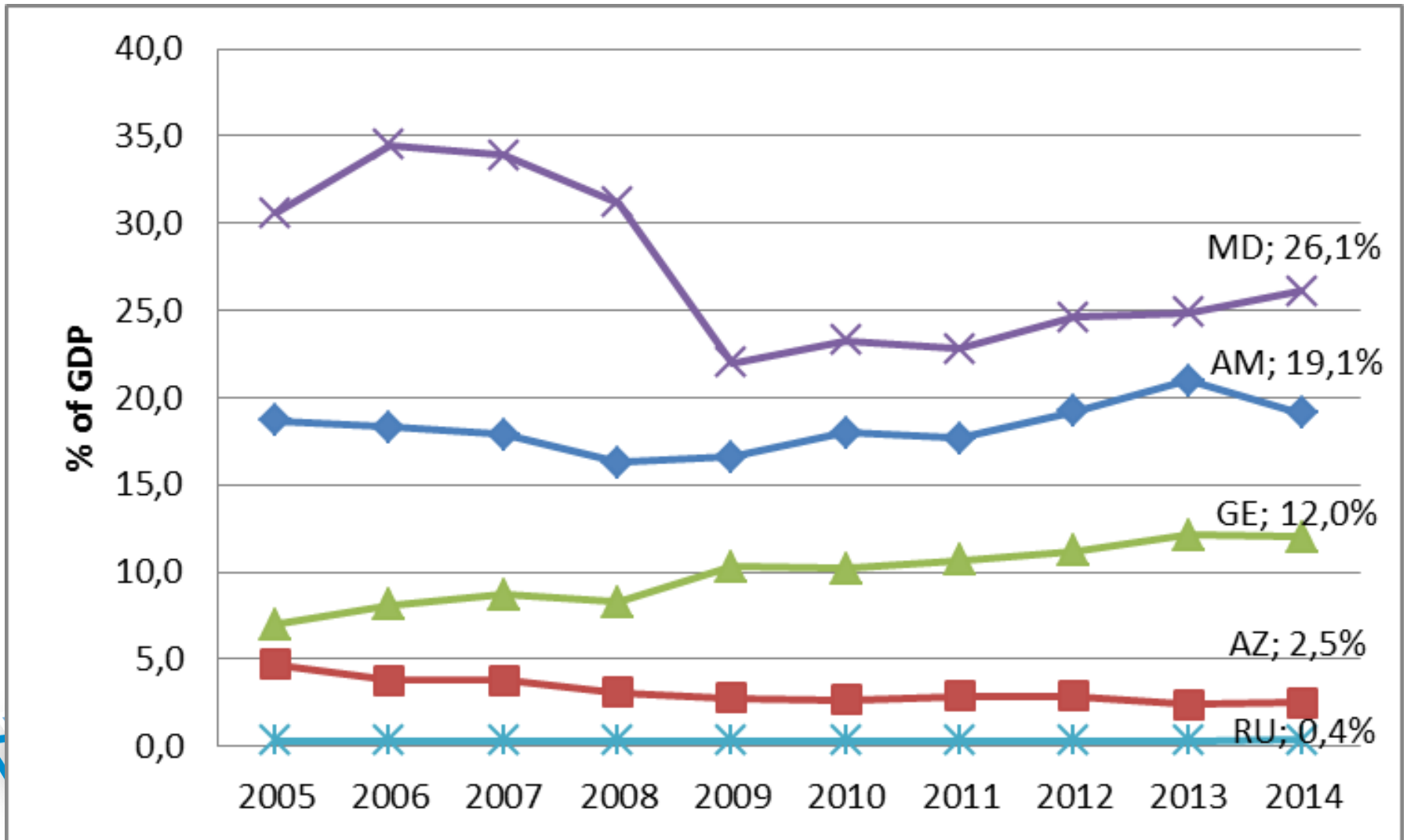


Framework Conditions

- Moldova is a small country; economic activity is concentrated in Chisinau – generates about 50% of GDP
- Population 4 million
- Small breakaway region Transnistria with 0.5million population
- The lowest GDP per capita in Europe with \$ 2,234 (in 2014), for comparison: RO \$ 9,996.7
- High emigration
- Remittances make nearly 30% of GDP
- Tradition of Education & Science



Personal Remittances as % of GDP



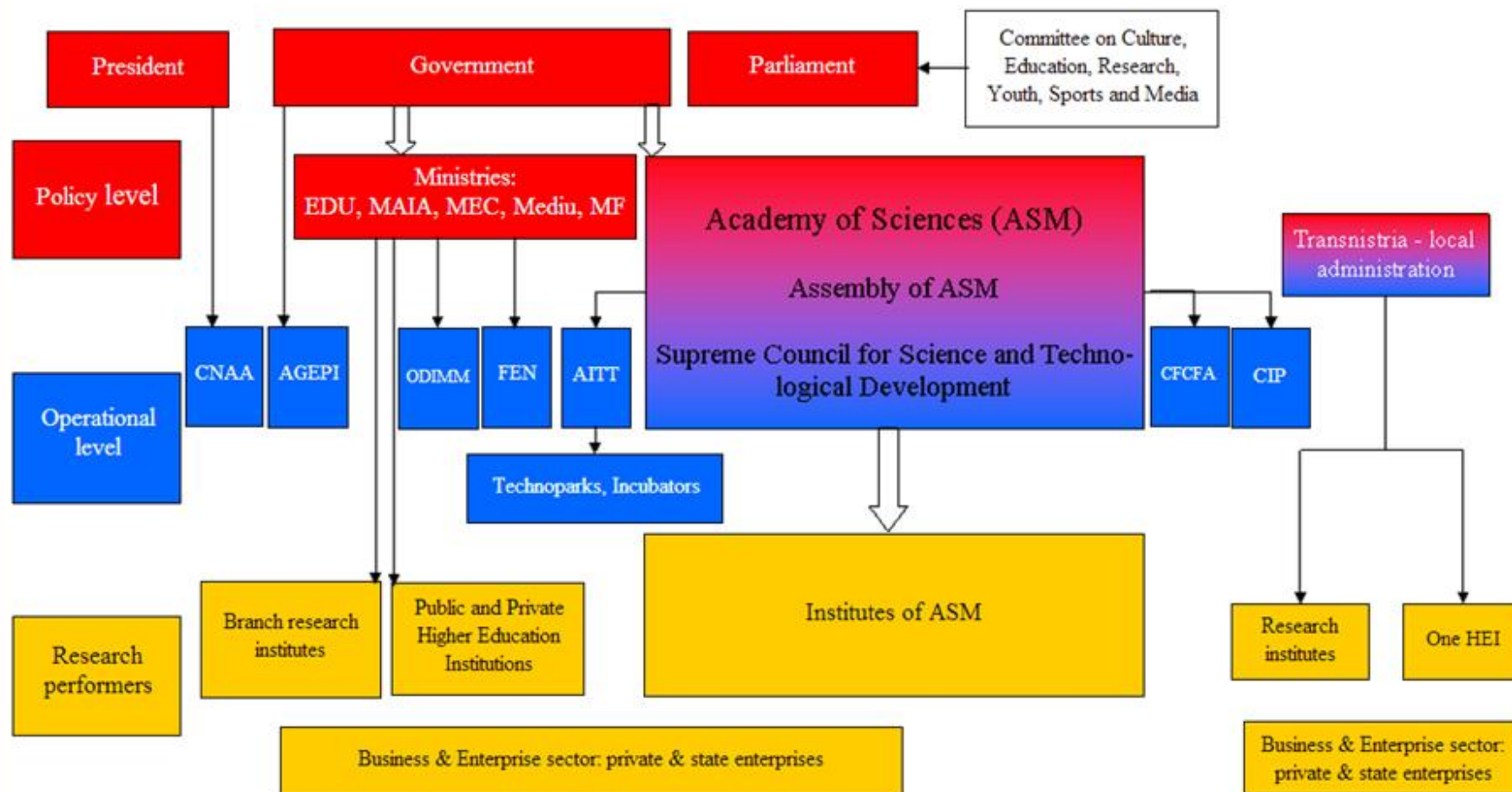
Source: World Bank, 2015

Framework Conditions

- **Successes in rapprochement to the EU in 2014:**
 - EU-Moldova association agreement: Deep and Comprehensive Free Trade agreement (DCFTA)
 - Visa free travel agreed
 - Association to Horizon 2020; MD was previously associated to FP7, as first New Independent State of FSU
- The European Union is Moldova's biggest trade partner. 46.4% of its trade takes place with the EU, followed by Russia (21.9%) and Ukraine (11.8%).



Organogram of the Moldovan R&D system



Abbreviations:

AGEPI - State Agency on Intellectual Property of the Republic of Moldova
 CNAA - National Council for Accreditation and Attestation
 CFCFA - Center for Fundamental and Applied Research Funding
 CIP - Center of International Projects

AITT - Agency for Innovation and Technology Transfer
 FEN - National Environmental Fund
 ODIMM - Organization for Small and Medium Enterprises Sector Development
 HEI - Higher Education Institution

EDU - Ministry of Education
 MAIA - Ministry of Agriculture and Food Industry
 MEC - Ministry of Economy
 Mediu - Ministry of Environment
 MF - Ministry of Finance

Governance

- Academy of Sciences is the central player in Moldova:
 - research & innovation policy maker (status of Ministry of Science)
 - research & innovation funder and implementing agency
 - main research performing organisation in the country
- A different approach as compared to EU countries



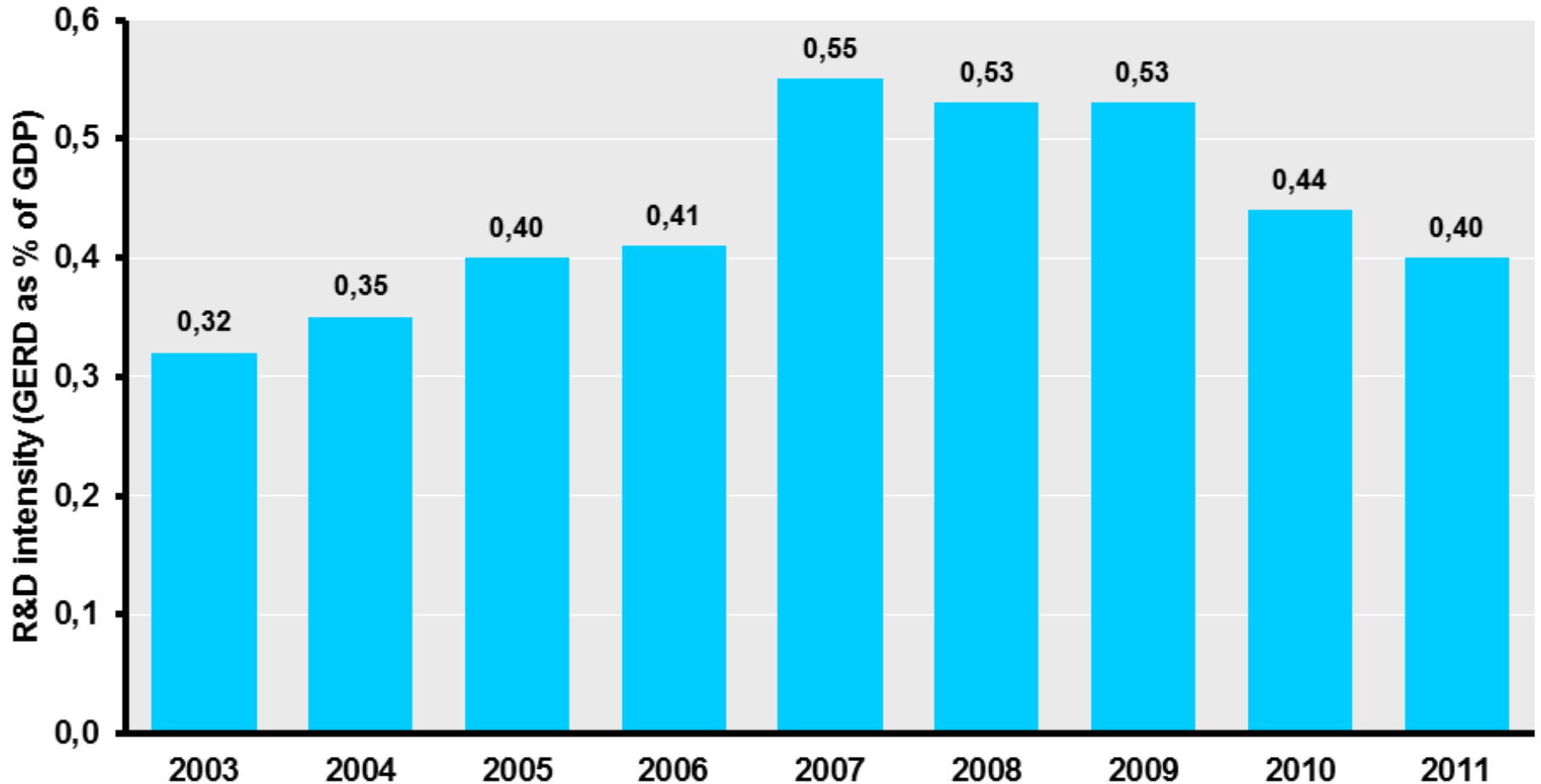
Governance

- Recent reforms undertaken:
 - Centre for Fundamental and Applied Research Funding established (CFCFA) in 2012
 - still within the structure of the Academy, frequent changes of leadership
 - strategy documents approved: research, innovation
- Besides ASM, several Ministries are important players:
 - Ministry of Economy, Health, Environment, Finance, Agriculture

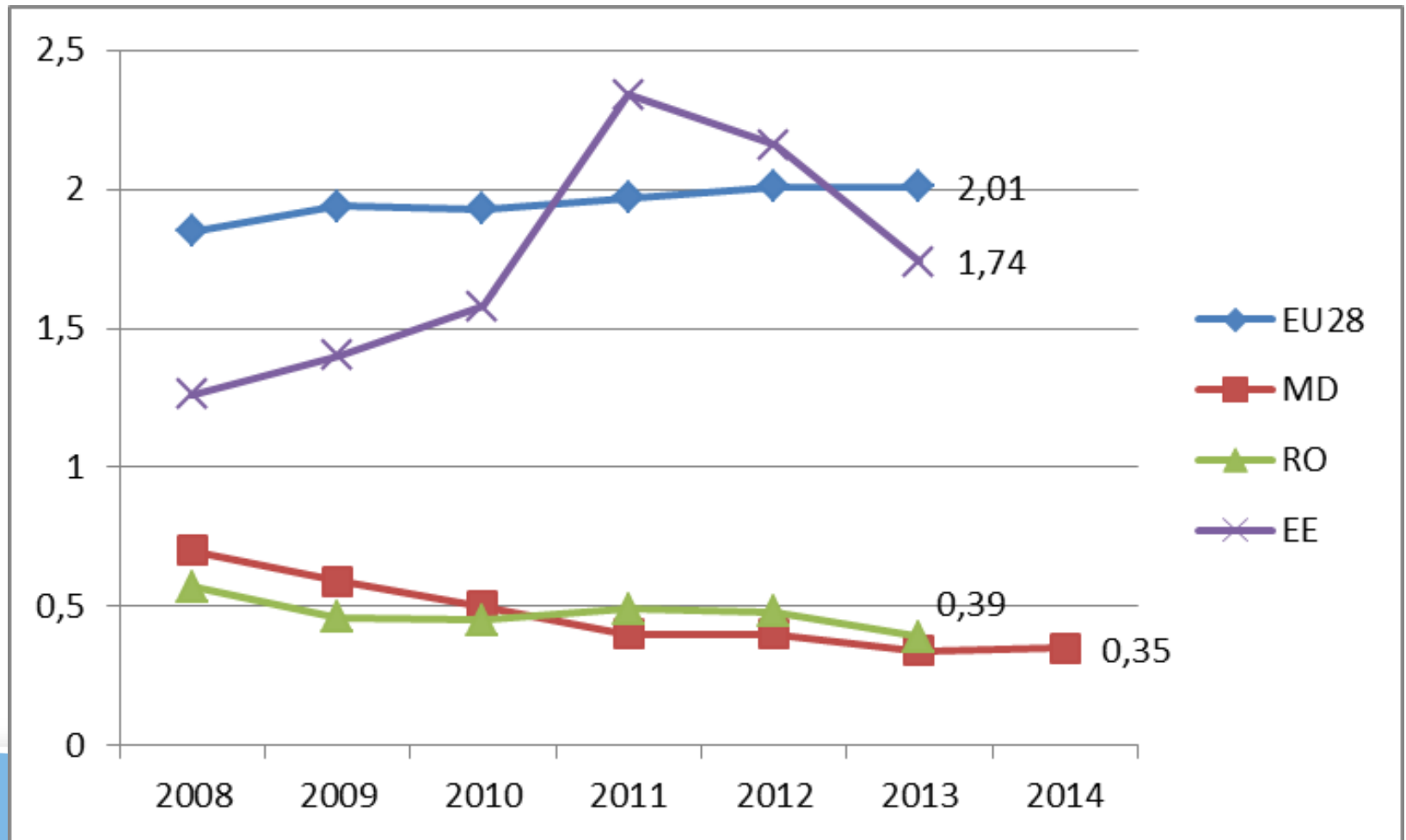


Financing

Figure 1 Republic of Moldova - R&D intensity, 2003-2011



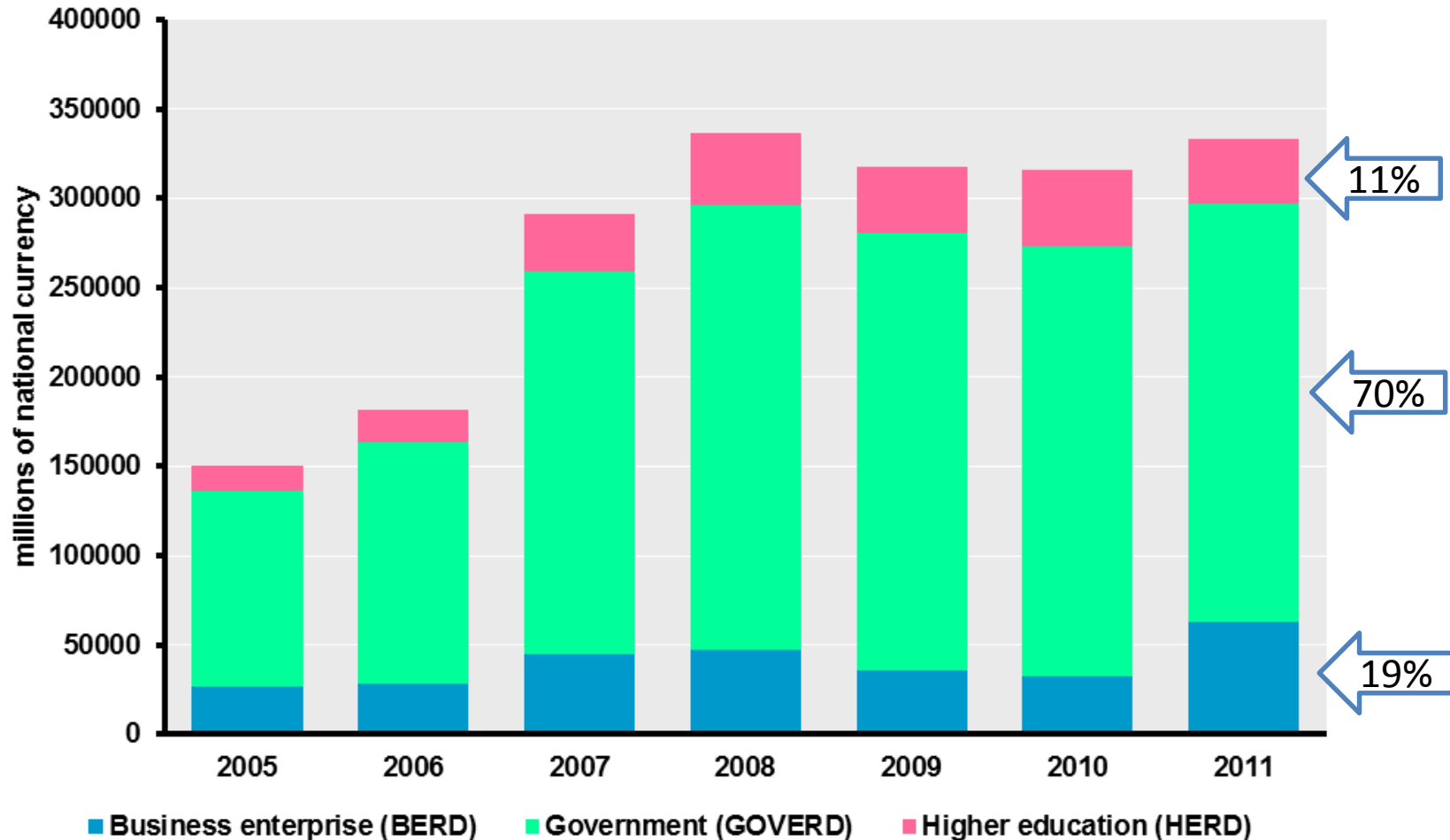
Financing: GERD as % of GDP



Source: UNESCO / UIS, EUROSTAT 2015

Financing

Figure 4 Republic of Moldova - GERD by sector of performance (in millions of national currency), 2005-2011



■ Business enterprise (BERD) ■ Government (GOVERD) ■ Higher education (HERD)

Source: UNESCO / UIS, 2015



Financing

- GERD is in absolute figures low: about €23mio/year
- Reliability of funding data (and R&I statistics in general) needs to be improved;
- Governmental sector is main research performer
- Share of Business-Enterprise sector is unclear; GERD data of ASM include mainly public research funding
- Share of Higher Education Institutions in research performance has increased
- Funding from abroad is an important source (~10%)
- Competitive funding has been decreased, as a reaction to the economic situation



Financing

Institutional Projects – semi-competitive



	2006	2007	2008	2009	2010	2011	2012	2013	2014
Institutional projects, million €	6.9	10.6	13.3	12.6	13	13	13.8	12.7	13.2
Share of governmental GERD, %	63.0	60.8	59.4	63.7	66.6	73.7	72.8	76.0	74.8

Main competitive funding schemes and amounts of funding allocated (million €)



	2006	2007	2008	2009	2010	2011	2012	2013	2014
State programmes for R&D	0.68	1.25	1.11	1.10	0.61	0.36	0.34	0.08	0.20
Independent projects*	0.08	0.13	0.27	0.28	0.32	0.31	0.38	0.18	0.16
International projects	-	0.33	0.41	0.52	0.48	0.42	0.28	0.36	0.35
Innovation and Technology Transfer Projects	0.19	0.52	0.72	0.75	0.86	0.69	0.62	0.45	0.54

Research Performers

- **Governmental:**
 - 19 Academy Institutes are the main governmental research performers, and in general in MD.
 - 15 branch research institutes under various ministries
- **Higher Education:**
31 Higher Education institutions, including 19 state and 12 private;
- **Business:** few companies, but no clear picture of the potential available
- **Private non-profit** only few players. E.g. Expert Grup

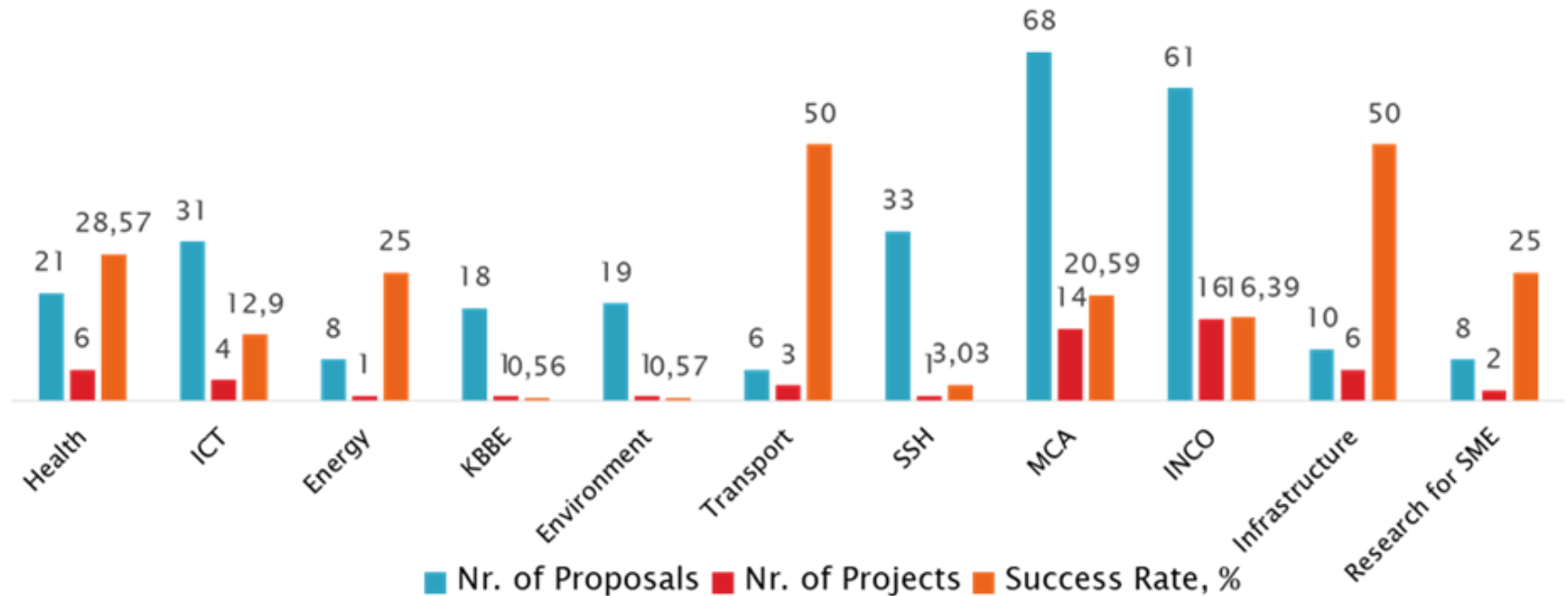


Human Resources

- **Difficulties to attract the young to research:**
 - low salaries distract.
 - the ASM has tackled a reform of the salary system, based on assessment and indicators
- **Higher Education:**
education is not fully up to the needs of the labour market; many students in the social sciences
- **Scientific Diaspora:**
Important potential for links & researcher mobility, used for evaluation, support projects for networking and collaboration



International Cooperation: FP7 statistics



MD participation concentrated in Marie Curie Actions and INCO, to lesser extent in thematic fields.



Source: CIP of ASM, 2015

Innovation

- Competence shared between the Academy and Ministry of Economy; some competition for competence
- **Agency for Innovation and Technology Transfer (AITT) :**
 - within the structure of the Academy
 - main instruments: Innovation & Technology Transfer projects, S&T parks and incubators managed, innovation prizes and fairs



Innovation

- **Organisation for Small and Medium Enterprises Development (ODIMM) :**
 - under the Ministry of Economy
 - main instruments: PARE 1+1 (attracting remittances!), credit guarantee fund, etc.
- **Linear innovation understanding**
 - research – research result – technology transfer – production sector;
 - stronger focus on collaboration research-business needed, incremental innovation



ener2i Innovation Vouchers

- **Innovation funding tool agreed and jointly implemented with AITT and ODIMM for Moldova;**
 - implemented in frame of EU FP7 funded project ener2i (www.ener2i.eu),
 - co-funded by CEI and Austrian Development Cooperation
- **Innovation Voucher Competition (IVC)**
Bring businesses and research organisations in direct contact; per Voucher € 4,000 awarded
- The Voucher money can be spent on R&D services (e.g. technology and market surveys, feasibility studies, etc.) and R&D activities (e.g. prototyping, travel for international knowledge transfer, etc.).
- Assessment of applications by an international evaluation panel.



ener2i Innovation Vouchers



ener2i is funded by the European Union's FP7 Programme under grant agreement no 609532

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Moldova



[Submission closed] The ener2i Innovation Voucher Competition in Moldova 2014 has been launched on Thursday, 11 December 2014 and closed on 2 March 2015! In total **34 applications** have been submitted to the competition and **11 have been selected for funding**.

A launch and information session has taken place during the [ener2i brokerage event](#) in Chisinau, on that same 11 December 2014.

The EU FP7 funded project **ener2i** (www.ener2i.eu) together with support of CEI - KEP AUSTRIA with funding of the Austrian Development Cooperation invites **Moldovan Small and Medium sized Enterprises (SMEs)** with **energy related innovation targets** in **Renewable Energy Sources (RES)** or with the **aim to improve their energy efficiency (EE) performance** to participate in the ener2i Innovation Voucher Competition - Moldova.

The aim of the competition is to initiate innovation projects in the field of EE and RES by

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Latest entries

SECURE-R2I Brokerage Event

Bay Innovation Days

ener2i Workshop on Energy and Innovation, and Brokerage Event in

Event Calendar

November 2015						
MO	TU	WE	TH	FR	SA	SU
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15



Summary

- **Moldova and its research and innovation system are in a difficult situation** (low funding, ageing of R&D personnel, etc.)
- **But things are moving and there is willingness to reform**
 - successes in EU cooperation: association & free trade agreement, harmonisation of rules, FP7/H2020 association ;
 - strategy development, with the use of foresight and external expertise;
 - reviews of the research and innovation system (2012 & 2015/16);
 - stronger focus on evaluation, using foreign experts
 - steps to make research funding more independent from policy & implementation (agency)
 - links to diaspora: for evaluation, joint projects
 - reforms of salaries: more merit based



THANK YOU FOR YOUR ATTENTION!

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