

# **ARMENIA: INNOVATION PERFORMANCE**

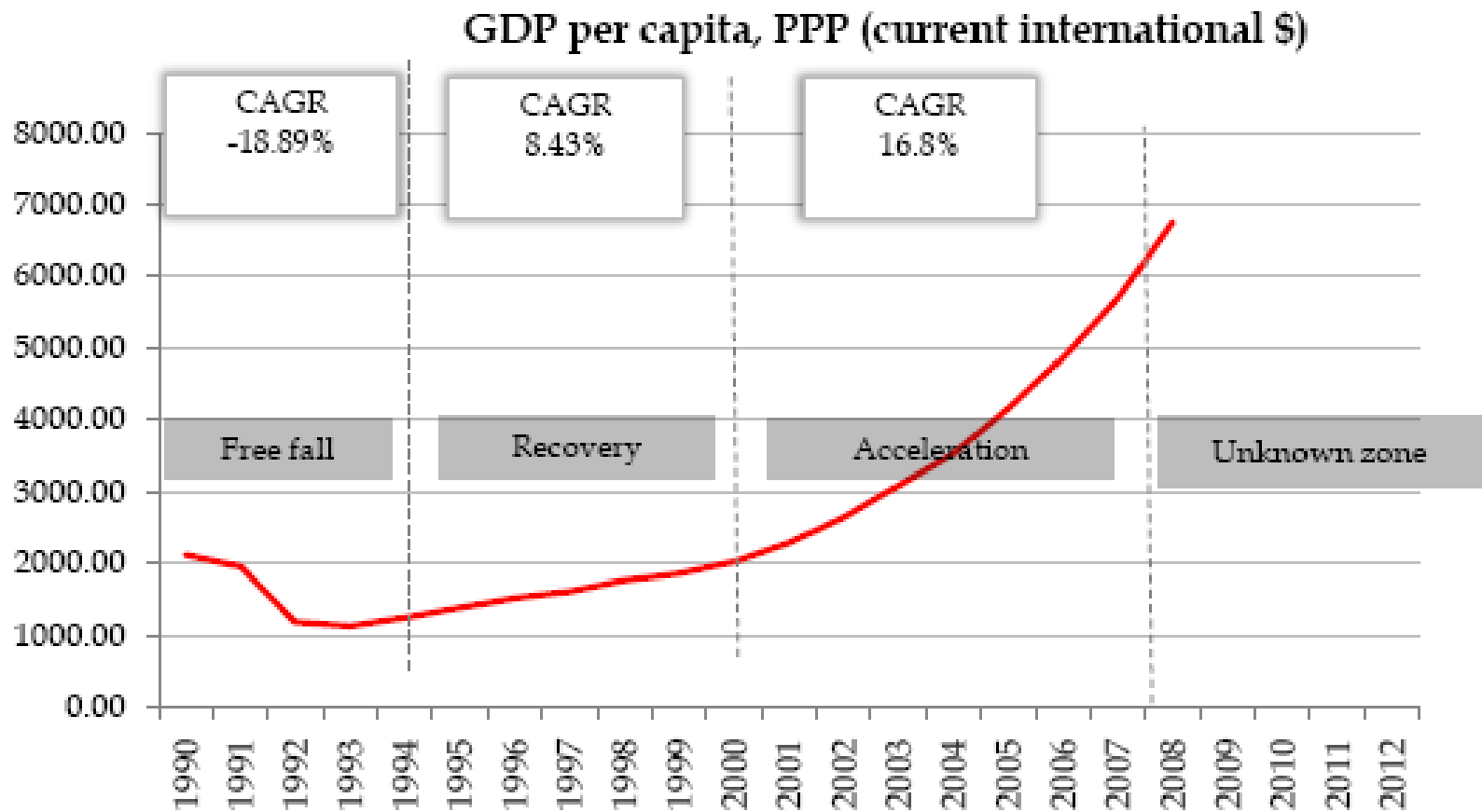
**Anahit Mkrtchyan  
Helsinki 2010**



# ECONOMIC PERFORMANCE DYNAMICS

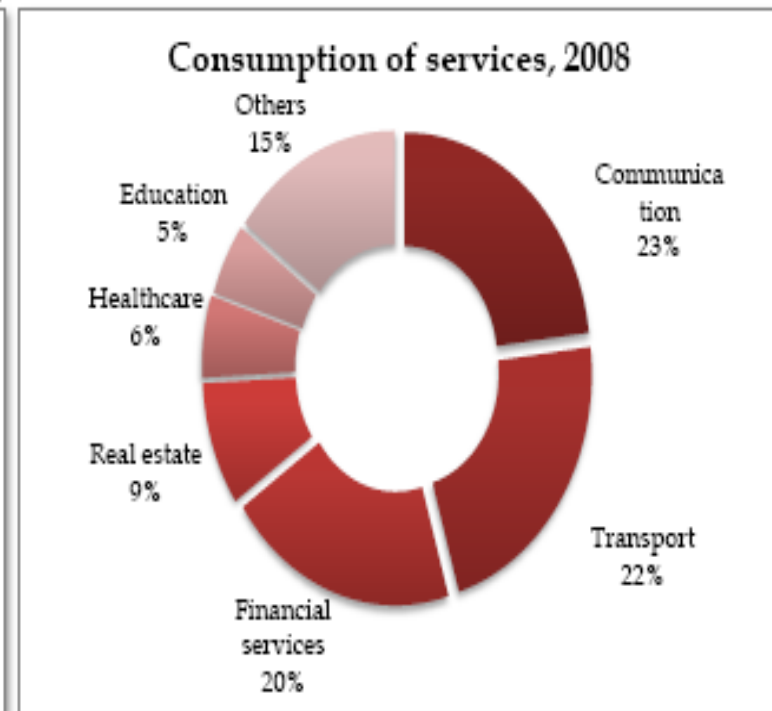
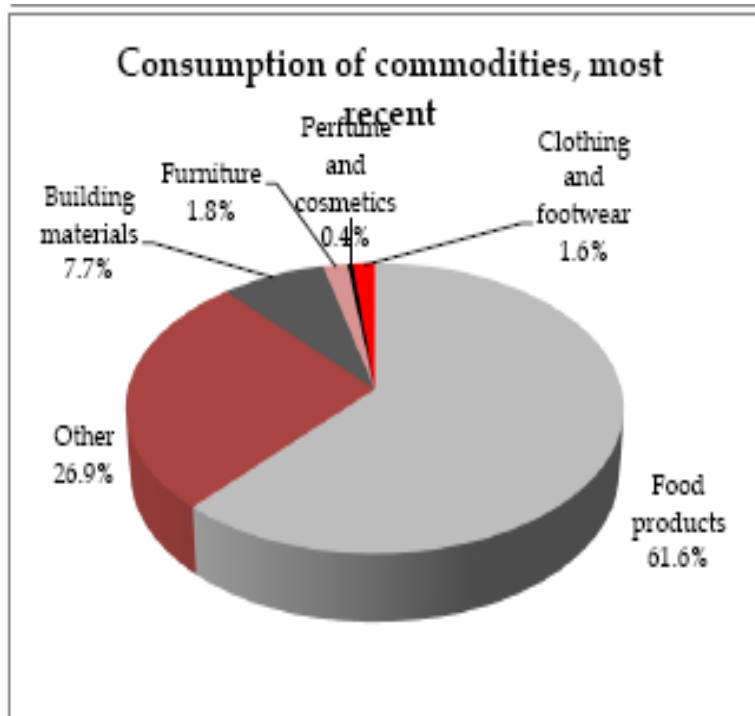
- After three consecutive distinct stages, distinguished by different dynamics of prosperity metrics, Armenia is entering into a new stage with unpredictable dynamics.
- The current economic crisis made the vulnerability of Armenia's economy apparent, expressed through unsustainable growth drivers, a narrow and resource-dominated export base, and a dependence on private transfers.

# ECONOMIC PERFORMANCE DYNAMICS

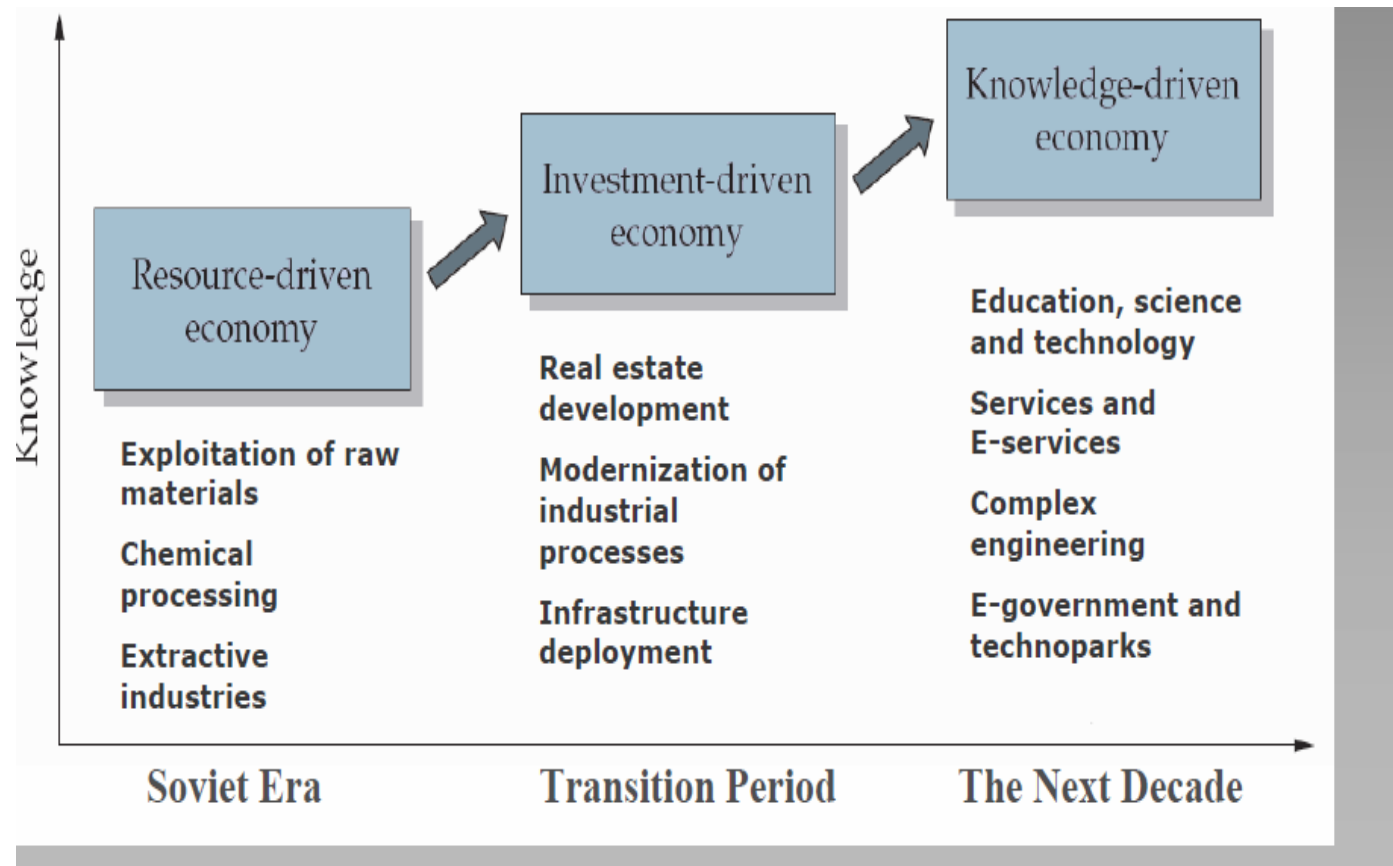


# QUALITY OF THE BUSINESS ENVIRONMENT

- The perceived low level of buyer sophistication in Armenia is predetermined by the consumption structure in Armenia.
- Longer-term demand is expected to become more sophisticated, dictating more stringent requirements towards quality and formats.



# Accelerating Structural Changes

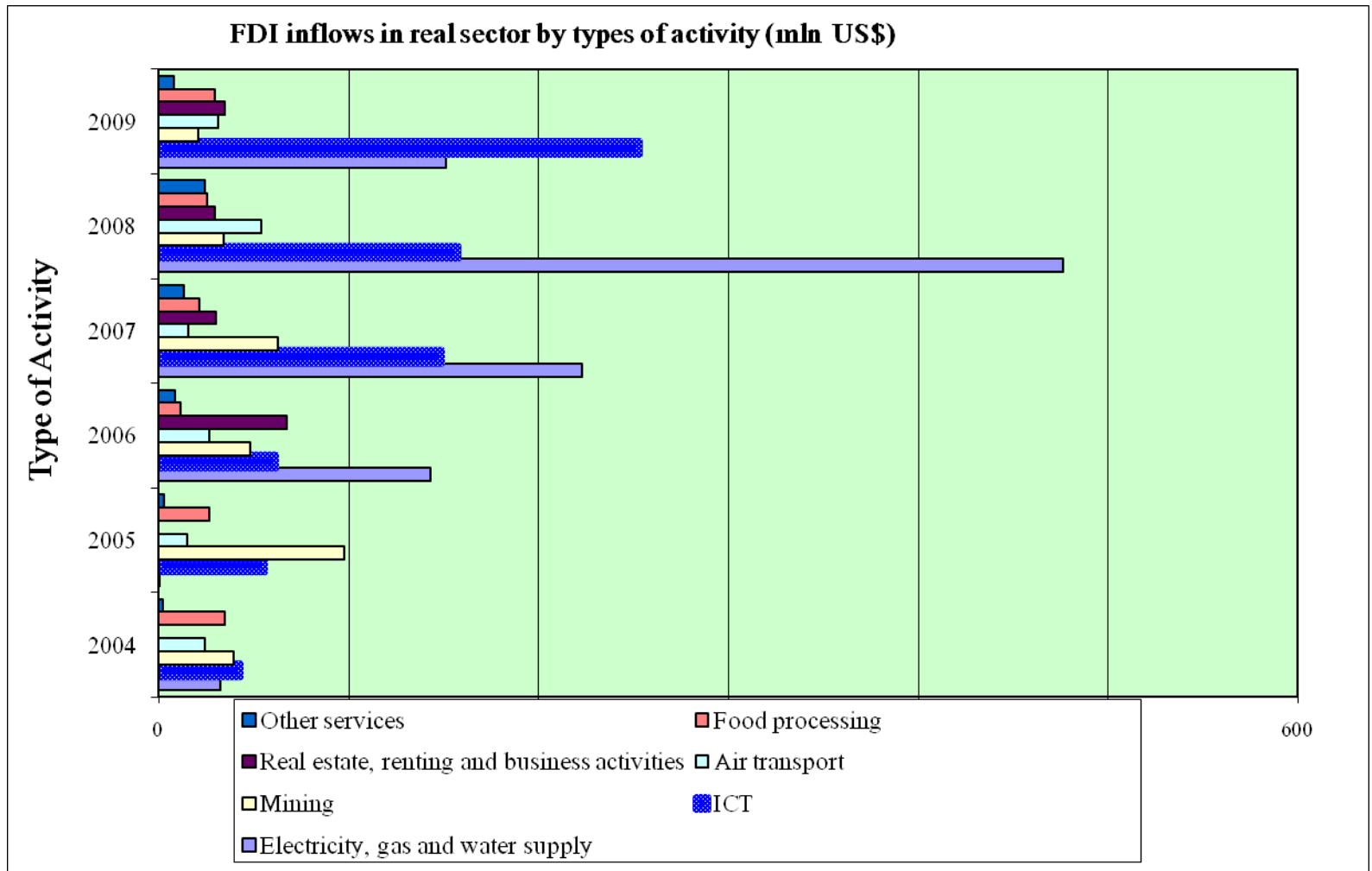




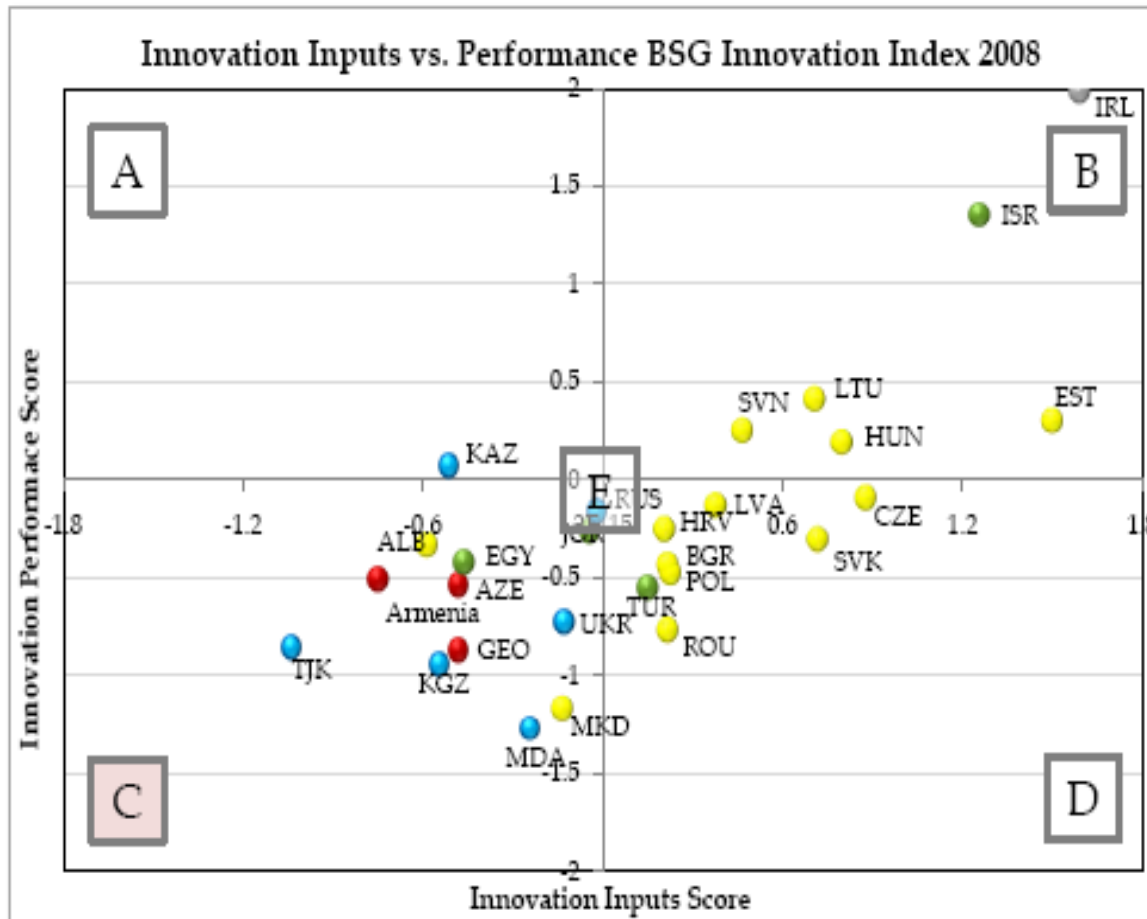
# Investment Driven Growth

- Increase Armenia's global competitiveness
- Improve business and investment environment
- Promote the entry of Multinationals
- Extend PPP by building infrastructure
- Form knowledge economy infrastructure

# The share of FDI in ICT sector is the biggest for 2009



*Armenia falls in the group of countries facing significant challenges in promoting and archiving innovation, doing relatively better in innovation performance than in inputs.*



Group	Definition
A	Countries reaping the reward of past policies or archiving high efficiency at converting inputs into performance
B	States succeeding at both inputs and performance
C	Countries facing significant challenges in promoting and archiving innovation
D	States struggling to translate positive inputs into performance
E	Countries at or near the mean in both inputs and performance

Source: *The Innovation Imperative in Manufacturing: How the United States can resort its edge*, Boston Consulting Group, March 2009

Note: The bubble colors indicate on the country distribution by regions (CIS, EE and EC).



# **ASSESSING ARMENIA'S NATIONAL INNOVATION PERFORMANCE(input)**

- The aging of the research personnel, low enrollment in science and engineering, low inflow of young talent into R&D sector are the major challenges in innovation inputs.
- The enrollment ratio in science and engineering in Armenia is extremely low compared to benchmarked countries: in 2008 only 15.8% enrolled students (19,414) were focusing on science and engineering.
- This creates significant threats to the future of science and technology sector in Armenia,
- Armenian R&D relies mostly on public expenditure and research grants and there is very little venture capital or business expenditure on R&D. As a result, there is a real gap between research performed and the needs of the market.

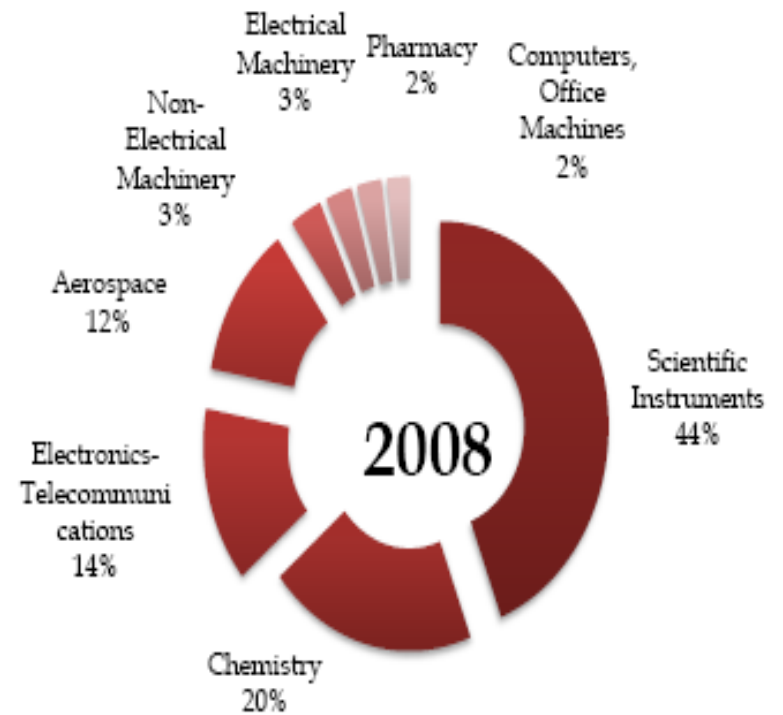
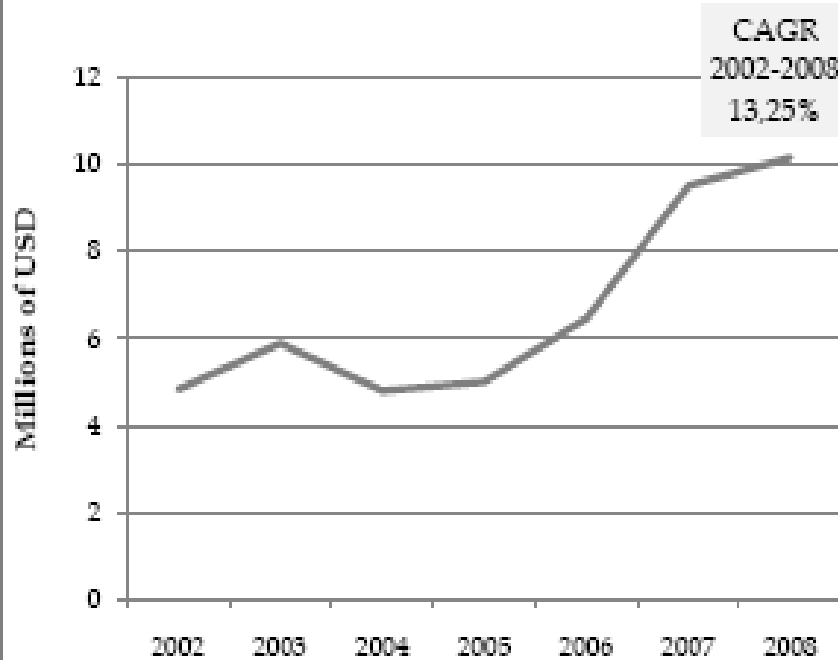


## **ASSESSING ARMENIA'S NATIONAL INNOVATION PERFORMANCE(output)**

- Armenians registered 1633 Patents in Armenia and 36 in the US.
- Armenia published 0.035 articles per researcher.
- In terms of publications in scientific and technical journals per million population Armenia outperformed most of CIS peers, except for the Russian Federation.
- Despite growing High-tech exports its share in total exports is negligible -only 1% of total exports.

# High-tech exports and distribution by product groups

## Total High-Tech Exports, Armenia





# Smart, Wired and Knowledge-Driven

- Currently two operating technoparks are — Andron Scientific Research Institute Technopark and the ViaSphereTechnopark
- There is also the Enterprise Incubator Foundation

## *Governmental programs*

- Gyumri technocity (Property-Based Initiative, Architectural Design, Incubation, Technology Development Facility, Education, Entrepreneurship Development)
- Entrepreneurship and Innovation Center
- VC fund (Joint Initiative with Sitronics and the World Bank)
- Yerevan Physics Institute (National Science Laboratory)



# Key Action Areas

## Establish Gyumri Economic Development Authority (GEDA)

- Director
  - Build partnerships with key players
  - Secure buy-in to the project
  - Organise and Drive Delivery
- Property
  - Detailed site planning and appraisal
  - Construction & Project Management
  - Property systems
- Enterprise Development
  - Develop and deliver education/enterprise programmes
  - Marketing & networking
  - Generate project pipeline
- Tourism Development
  - Develop and Deliver New Tourism Products
- Finance/Legal/Admin



# VC fund (Joint Initiative with Sitronics and the World Bank)

- Russian-Armenian Venture Capital Fund is being established as an initiative of Russian and Armenian government Commission for economic cooperation between Russia and Armenia
- Russian-Armenian Venture Capital Fund will be funded by Armenian governmental development institutions, international finance organizations and private investors
- Prospective anchor investor Russian company SITRONICS intends to co-invest into the Fund as well as to render part of its RAO MARS site to high tech companies & their production facilities and may acquire successful companies eventually at exit stages
- Armenian government intends to grant special economic zone status to RAO MARS site
- Russian-Armenian Venture Fund will invest into Armenian and Russian companies that run innovative business within the generic framework of priority lines for technology development of both countries and are interested to establish production in Armenia
- The Fund will also invest into foreign companies that are seeking venture financing and are willing to bring their technologies to Armenia and place manufacturing facilities for high tech products in Armenia thus establishing high tech business in Armenia