COMMENTS TO CHAPTERS 4 AND 5 OF THE REPORT ON INNOVATION PERFORMANCE REVIEW OF ARMENIA

JOSE MOLERO
UNIVERSIDAD COMPLUTENSE DE MADRID
&
INSTITUTE OF RESEARCH ON INNOVATION (IREIN)
INDEX

- INTRODUCTION & GENERAL COMMENTS
- CHAPTER 4 COMMENTS
  - Supply and demand
  - Structural aspects
  - R&D driven model?
  - Imported technology
  - International comparison
  - Human capital
  - Innovation management
- CHAPTER 5 COMMENTS
  - Structural aspects
  - Reforms: path dependent
  - The role of firms
  - University changes
  - MNCs
  - Technology transfer
Thank you to ECE/CECI (TOS–ICP) for inviting me to this exercise of examining the Report on Armenia Innovation Performance (AIP).

I have had the pleasure of meeting profs Radosevic and Inzelt in different occasions and I know their capacities and adequacy to carry out the study. My impression is absolutely favourable and positive. Equally I find their recommendations very suitable for improving the (AIP).

My comments have a twofold perspective:
- To highlight some aspects which are in the report but I think the need to be underlined.
- To introduce some complementary thoughts about elements which could enrich the final report.
GENERAL COMMENTS

- The two chapters are interrelated; the generation of knowledge has a remarkable piece precisely in the interaction between industry and Science; thus, most reflections can be useful for both chapters.
- Both chapters detect an important weakness of AIP: the shortage of adequate data and statistics. I fully agree the improvement in this aspect is crucial for the future. Otherwise political decisions can not face the actual situation.
- The importance of the firms in any innovation system is shown in both chapters. So, the deficit of enough and adequate firms is one of the basic factors to face urgently to draw a dynamic upgrading innovative process.
CHAPTER 4 COMMENTS

- It is very important to consider supply and demand sides simultaneously. Sometimes the temptation is to concentrate the attention just if the production of knowledge and not on demand/market features.

- In both cases, structural factors are determinant; examples:
  - Firms: Number, size, age, concentration, etc.
  - Sectors. Technological content, weigh of different sectoral categories, relation between manufacturing and services.

- The conclusion is innovation policy has to be considered interacting with other policies (industrial, education, and so on)

- I fully agree with prof. Radosevic on considering R&D driven model is not necessarily the best option for Armenia today. Just to add something to his consideration I understand it is better an strategy of catching up in which production, importation and integration of knowledge interact.
CHAPTER 4 COMMENTS (II)

- The issue of foreign technology deserves more attention. A better understanding of its characteristics is a fruitful source for understanding strengths and weaknesses.
- The international comparison can benefit from the inclusion of countries of other regions such as LA or European periphery.
- Human capital has different challenges (age of R or shortage of doctors). I wonder whether it would be a powerful complement to carry out an explicit strategy of bringing expert to teach in Armenia.
- We must not forget that there is also a deficit in innovation management.
CHAPTER 5 COMMENTS

- Again demand factors arise; some elements to consider:
  - **Private demand:**
    - Consumers (income distribution)
    - Firms (input–output linkages)
  - **Public demand:** Public procurements

- Constraining factors in institutional reforms. I think it is important the reforms to have **three characteristics:**
  - coordination
  - ways to guarantee their sustainability
  - continuous evaluation mechanisms.
CHAPTER 5 COMMENTS (II)

- Changes in Universities. On the one hand the classic three missions approach can help (teaching, researching and development contribution). However, it is significant to avoid two shortcomings:
  a) the simple replication of the same model in all centres, instead of a desirable degree of specialisation and competition
  b) the thoughtless way of just creating more universities without attending to quality.

- MNCs. The desirable movement to more value added firms has to combine attractive and absorptive capacities to gain access to new technology and markets.

- Technology transfer bodies. Dangers: to be just “supply” managers (forgetting demand) and to repeat the traditional linear model, instead of reaching ways of joint production of knowledge.
THANK YOU FOR YOUR ATTENTION

José Molero:
Universidad Complutense de Madrid
jmolero@icei.ucm.es