

THE JOURNEY OF STATISTICS WE SHOULD TAKE: EVIDENCE FROM ARMENIA

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The state of scientific progress in Armenia has been on hold or even declined significantly in the 1990s. The elite scientists with outstanding record had fled the country based on financial motives. Most of them rather contributed the progression of science in the countries they emigrated to, and Armenia was left aside (Nersesyan, 2002). The trend continued until the 21st century when the physics, mathematics and material sciences started gaining momentum of progress. However, even in this case, the social and financial incentives to pursue degrees in science are greatly lacking.

The international reputation of the physics and mathematics ever since the soviet era has given these subjects slight push, which cannot be said about statistics, medicine, biology, etc. Statistics, being the fundamental subject for not only other science but also economics disciplines, is one of the least developed areas in Armenia. Similar to many developing or in-transition countries, Armenia has very weak educational system, where evidence-based decision-making is not-popular or even discouraged. Curricula in universities and schools ignore the role of statistics in the society. For example, physics departments in top universities, such as Yerevan State University, provide only one course in statistics. The most common statistics course is the Theory of Probability. The subject is at a more vulnerable level for medical students, chemists, biologists, engineers, and economists. Surprisingly, there is noticeable trend of the use of statistics in social sciences, which are relatively more integrated to the international associations. Consequently, it can be concluded that the integration to the international science associations could have significant influence on the science development in Armenia as well as in other developing countries.

The paper analyzes and proposes methods that could potentially increase the statistics knowledge in Armenia. One of the starting points is the establishment of the Armenian Statistical Association (ARSA) in collaboration with American Statistical Association, Educational Ambassador Program, and the National Statistical Services of Armenia. The key objectives of the association would include: 1) the promotion of statistics through seminars, workshops, lectures on volunteer basis, classes; 2) collaboration between the Armenian and international scientists for advancement of research and teaching; 3) spillover effect on other science fields which would essentially lead Armenia to higher educational standards and higher summits of intelligence and literacy; 4) overall contribution of Armenian scientists to the theory and practice of statistics.

In addition, the findings of this study will include quantitative analysis of the current state of statistics. For this purpose, students at both schools and universities, researchers at educational academies and science institutes, professors and teachers, governmental employees, and practitioners will be asked to complete a questionnaire about certain statistical concepts that would measure the level of statistics knowledge, their perception of statistics which will be used to devise the further actions of the ARSA, basic interpretation of simple headline news (such as comparison of per capita income of various countries) to analyze their logic behind numbers, and suggestions to make the ARSA more workable and useful to the society.

REFERENCES

- Nersesyan, A. J. (2002). Conflicts of Interest in Science in Armenia. *Science and Engineering Ethics*, 8, 291-293.
- Informal interviews with students, professors, and teachers.
- Support of American Statistical Association through the Educational Ambassador Program (through Dr. Martha Aliaga).