

The Quantity of Publications in Iran and the World via Mathematics Subjects

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Abstract: We compare the quantity of publications in Iran and the world with respect to the mathematics subject classification and discuss why Iranians are producing many papers in certain subjects and very few in some others.

Using MathSciNet [1] which is one of the most indexing and abstracting systems in the world, we gather information on the quantity of publications of all mathematicians as well as Iranians (with at least an author having an address in Iran) up to the end of 2015. In Fig (2), the red columns of the following chart show the relative frequencies of publications of Iranians in various mathematics subject classifications (employing MSC2010) obtained by dividing the number of publications in each subject by the total number of publications of Iranians. The blue columns give the relative frequencies of publications of all world mathematicians (including Iran) in the corresponding MSC's.

Fig. (1) presents the total number of papers of Iranians in all MSC's. It shows that the highest frequency is 2328 in MSC65 (Numerical analysis) and the lowest nonzero frequency is 6 in MSC19 (K-theory) by excluding MSC00 (General).

As one can see from Fig (2), the rate of the publications in MSC43 (Abstract harmonic analysis) and MSC13 (Commutative algebra) in Iran is about 6 times the rate of the publications in the world, and in MSC39 (Difference and functional equations) and MSC74 (Mechanics of deformable solids) the rate is about 4. This happened while Iranians are neither systematically developing any discipline nor much publishing in leading math journals. By excluding MSC00 and MSC01, the rate of the publications in MSC52 (Convex and discrete geometry), MSC57 (Manifolds and cell complexes) and MSC14 (Algebraic geometry) in the world is about 10 times that of Iran.

In our opinion, two following factors have made this irregularity:

(1) The aim of the Iranian ministry of Science, Research and Technology has been improving its scientific situation and ranking among other developing countries. In this direction, its policy during the past decade has been emphasizing on publishing more and

more papers by rewarding scientists. In addition, there may be some topics in MSC43, MSC13, MSC39 and MSC74 in which one can easily publish numerous papers while such areas probably cannot be found in MSC52, MSC57 and MSC14.

(2) The policy of the Iranian ministry of Science, Research and Technology during the past decades have been allowing more students entering PhD programs, and requiring of publishing research papers in international journals for graduation. Further, the national PhD programs have been rapidly developed and study abroad has been much more difficult. Many people in Iran have attended PhD programs and upon graduation, they have been hired in Iranian universities. The effect of this was limiting of some of fields of studies. So the new academic members of Iranian universities have researched in the same subjects of their processors. This has resulted concentration of research on certain subjects and neglecting other areas.

References:

[1] <http://www.ams.org/mathscinet>

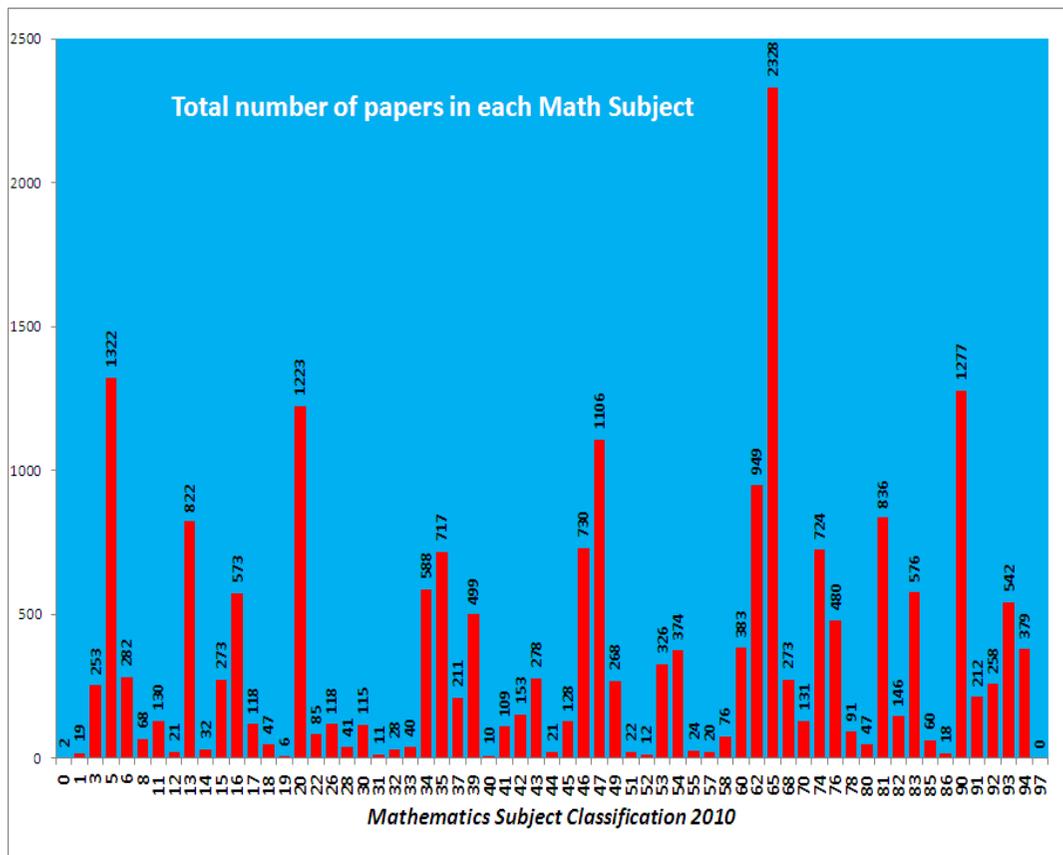


Fig. 1

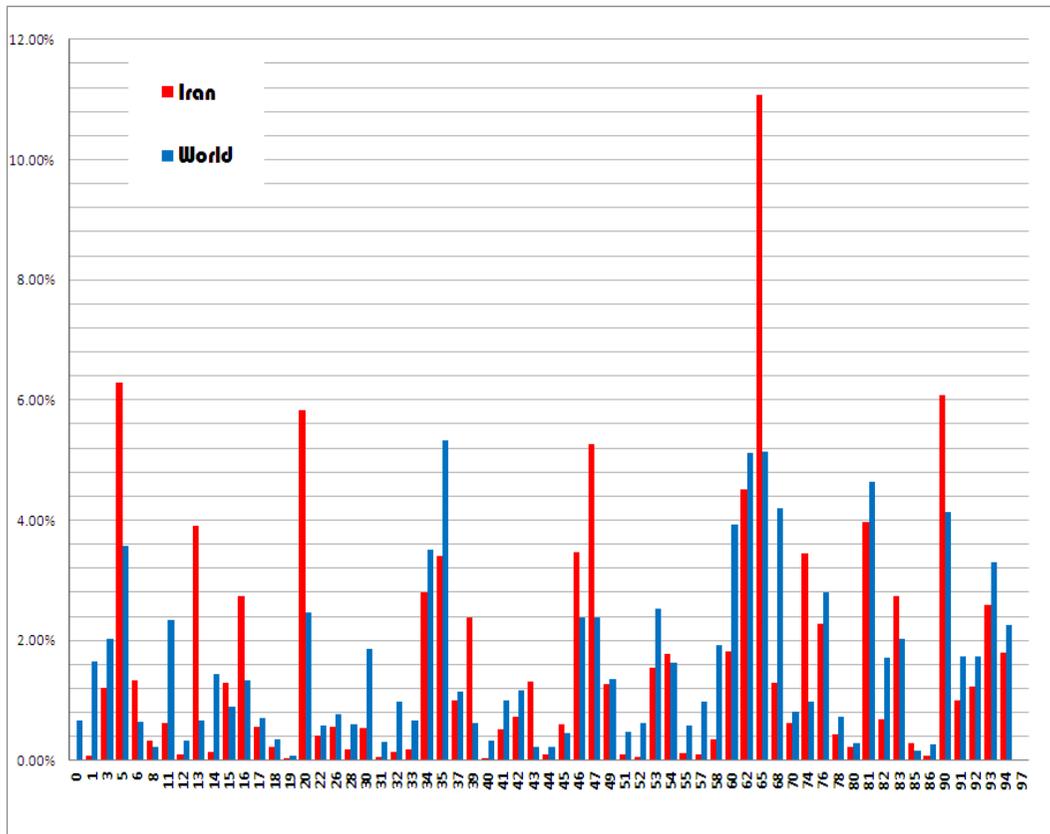


Fig. 2