Olympic Medal Mania

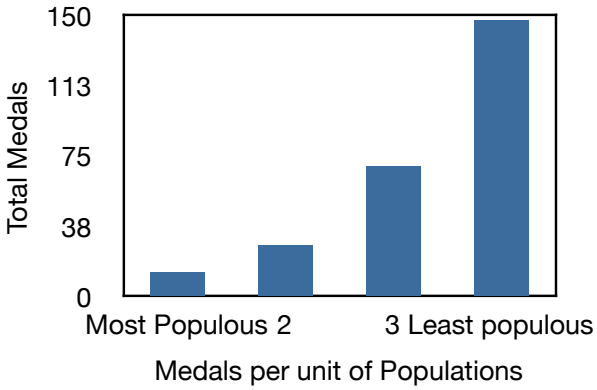
Medal Mania it has been called: the widespread, intense, obsessive focus on the numbers of medals, especially gold ones, won at international 'games': particularly evident in relation to the recent London Olympics. National pride, the estimate of success or failure, and evaluation of the effort and amount of money put into preparing for the Games, as well as thoughts about how better to prepare for the next round, seemed to depend very much on the medal count and how high up, or low down, a country was placed in the listing of medal-winning countries. So much for athleticism and the 'also rans', coupled with derogatory remarks such as: Failure by one hundredth of a second: Beaten by a rival country: We expect better from an institution devoted to sport. Scarcely any praise for the athletes who were good enough to gain selection to represent their country but who 'failed' to get a medal, and even fewer laudatory remarks about small, poor countries which managed to be represented even if they won a medal or two.

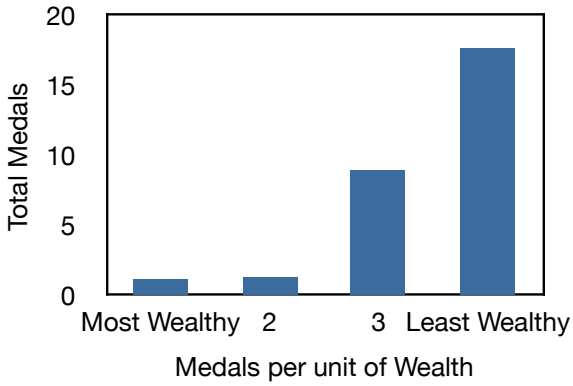
In the London Games 204 countries provided about 10,500 athletes to compete in 302 events in 29 different sports, eventuating in 962 medals being awarded to athletes from 85 countries. The USA and China came to the top of the lists for total medals, and for gold ones, with Australia coming 7th and 11th. Hong Kong, Kuwait, Morocco and Afghanistan can be regarded as being at the bottom of the list with just one bronze medal each. Athletes from 119 countries went home without any medals.

What part does population play in the medal winning stakes?
Obviously, the larger the population of a country the greater is the pool from which potential Olympians might be drawn: but whether they can and will become medal winners is another matter. The populations of the countries mentioned above, in millions, are: USA 314; China 1,347; Australia 23; and the others, 7, 4, 33 and 26. No clear relationship is discernible there, of course, nor by skimming through the whole list country by country.

One way of tackling the question more generally is to divide the 85 medal-winning countries into four groups according to size of population, combine the medal count and the populations of the countries in each group, and compare the groups on the basis of medals per unit of population. One can imagine uniting nations into four competing blocs. The most populous group, or bloc (of 21 countries), with a total population of 4,528 million, won 603 medals of all colours. The least populous group (22 countries) had an overall population of 52 million and won 77 medals. This gives a somewhat surprising finding that, per unit of population (one hundred million), the least populous group won more than ten times the number of medals won by the most populous group – 148 v 13. Intermediary figures for the other groups are illustrated in the chart below. A similar stepwise inverse relationship between population and winners was found for gold medals and for the weighted score for all medals (three points for gold, two for silver and one for bronze).

What about wealth: What part does national wealth play in the medal-winning stakes? Ranked by the number of medals won per unit of national Gross Domestic Product the USA was placed 70th, China 56th and Australia 49th. Here again, using the four bloc approach, and dividing the 85 countries into four groups according to their national gross domestic product (GDP per capita x population), produced a result similar to that for population. Per unit of wealth (US$100billion) the least wealthy group (22 countries with a combined wealth of $356billion and 63 medals) won fourteen times the numbers of medals won by the most wealthy group (21 countries, $55,355billion, 651 medals) – 17.7 v 1.2. The findings are shown in the charts below.

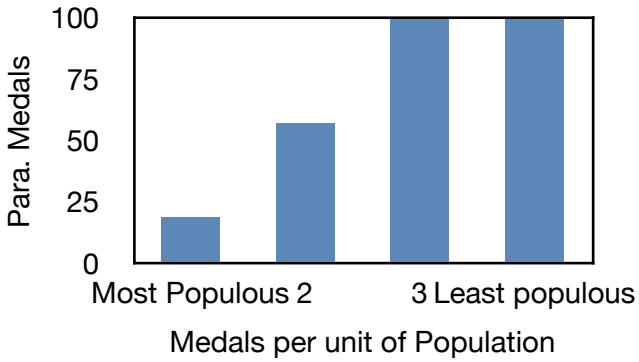


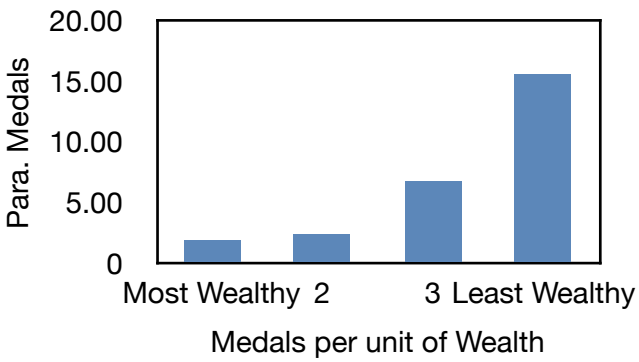


The USA and China, who topped the medal list, winning 192 medals between them, were both in the most populous and most wealthy groups. Australia was in population group 2 and wealth group one. The other countries mentioned above, lowly medal winners, were scattered through groups 2-4.

The Paralympic results showed the same sort of relationships. A total of 1522 medals, 503 of them gold, were won by 75 countries. Ranking these countries by population and dividing them into four 'blocs', the most populous group of 18 countries won 843 medals and the least populous group of 19 countries won only 18. However, per unit of population, the least populous group won five times the number of medals won by the most populous group — 100 v 18.7.

Similarly, when ranked by total wealth the most wealthy group won 1006 medals and the least wealthy one only 97: but, again, compared on the basis of per unit of wealth, the least wealthy group won eight times the number of medals won by the most wealthy group — 15.5 v 1.9. Similar relationships to population and wealth were found for gold medals.





Assuming that these findings are meaningfully valid, what might be the explanation? One possible answer, offered by two friends so far, is that it may depend, at least in part, on there being a greater proportion of people in less populous and less wealthy countries who are engaged in physically active pursuits like farming, while more people in affluent populous countries are much less active and therefore less sportily fit. Whatever the truth of the matter these findings, and the subject in general, are worth contemplating, especially alongside such analyses as the one that found that every medal won by Australia cost its taxpayers $10 million, and by Great Britain $7million.