

# More competitors, less competition

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The larger the number of examinees, the lower the average grade. This is one of the findings of a series of new studies carried out by scientists at the University of Haifa and the University of Michigan. "It is a well-established fact that subjective factors influence our motivation to compete. Our recent studies have shown that objective factors, such as the size of a competing group, also have an effect on motivation," explains Dr. Avishalom Tor from the University of Haifa's Faculty of Law.

The series of studies, which Dr. Tor carried out along with Dr. Stephen Garcia of the University of Michigan, were designed to examine whether a large number of participants in a competition would affect motivation and the performance of the individual [competitor](#) even in cases where the number of competitors does not influence the anticipated value of winning.

The first study investigated the grades of the SAT university entrance examination across the USA. The scientists divided the number of examinees in each state by the number of sites where the test was held in that state, to determine the average number of examinees per site in each state. The researchers took into consideration differences between the states in relevant socioeconomic variables, finding that the lower the average number of students being examined at the sites of a given state, the higher the average score in that state.

Seeing as it is difficult to make assumptions based on averages calculated at a state level, a second and more focused study was carried

out. This time, the results were gathered from a psychological test, known as the Cognitive Reflection Test, that was taken by 1,383 students at the University of Michigan. The data was assembled from 22 different sittings of the same test over the course of three years, when it was known not only how many examinees were taking the test at each session but also their individual grades and demographic variables. This individual-level data similarly showed that the fewer the examinees at a specific session, the higher the average results.

A third study that the researchers carried out consisted of a controlled survey. The experiment asked 74 students to take a short, timed quiz when sitting alone. Half the students were told they belonged to a group of 10 students taking the quiz, while the other half were told there were 100 examinees in total. They were also told that the first 20% to complete the test - without compromising the accuracy of their answers - would be given 5 dollars. The results showed that students who thought they were competing against 9 others completed their tests significantly faster than those who thought they were competing against 99 others, although the accuracy of the responses did not differ between the groups.

Additional experiments directly examined how competitors judge their chances to win, considered interpersonal differences, and showed that the variation in competitive motivation and performance directly results from the drop in the importance ascribed to social comparison (the process by which people evaluate themselves in comparison to others) as the number of competitors rises.

"The results of this study have relevance in almost all areas of life. They shed light on the issue of classroom size, as smaller classes would improve student [motivation](#) to 'compete' and to strive for better achievements. The findings also affect the workplace: salespersons working in large warehouses, for example, would be lower achievers

than those working in small groups," Dr. Tor concludes.

Source: University of Haifa ([news](#) : [web](#))

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