

Selective Schools Select Alphabetically

By Stepan Jurajda and Daniel Munich

Sorting based on "alphabetical order" is a fact of everyday life. Team members are listed in this order, including co-authors of scientific papers; students may be seated in a classroom according to their last name's position in the alphabet; competing firms are displayed alphabetically in phone and other directories. Could this systematic and omnipresent sorting provide an advantage to those positioned high in the alphabet? This question is often the object of popular discussions. Yet, so far there is little evidence on the issue, thanks in large part to lack of data with individual initials.

The question of non-discriminatory sorting is particularly important when allocating a prize or distributing a rationed good or oversubscribed public service, even when the allocation mechanism is based on applicants' characteristics. For example, it has been shown that the (randomly assigned) order in which musicians play in a competition affects their success, both in the competition and in their whole career.

In our study we ask whether students with last names sorted high in the alphabet enjoy higher chances of being admitted to oversubscribed selective schools.

Applicants at the Top of the List Treated More Favorably?

Why would one expect such effect to take place? Alphabetical sorting can be applied in school admission procedures when lists with multiple student characteristics (including test scores) are prepared for admission committees or when students are called to oral exams in alphabetical order. When applications are evaluated based on multiple criteria in the absence of a clear summarizing measure, marginal cases at the top of the list may obtain more favorable treatment compared to marginal applicants toward the bottom of the list where constraints on the total number of possible admissions become more binding. Similarly, it is plausible that examiners are more attentive and approving, and applicants more rested, during oral exams scheduled on the morning of an exam day.

We focus on the Czech Republic, which features a highly selective admission process at both secondary and tertiary schooling levels, and thus provides a good example of the many European selective education systems. Furthermore, there is anecdotal evidence that alphabetical sorting is used in student admission, at least at the tertiary level. Our empirical analysis is based on the experience of the whole population of secondary-school graduates in 1999. We start by studying the success of their applications to Czech universities and find a small, but statistically significant effect of one's last-name-initial position in the alphabet on admission chances for those applications on the margin of admission.

“Z” Students Have Higher Ability

The presence of alphabet-affected admission practices implies that among students admitted to selective schools, those with last names in the bottom part of the alphabet have on average higher ability. To see this, consider a simple model of school admission with students of three ability

types (high, medium, and low) distributed independently of last name initial, where all high-ability and none of the low-ability students are admitted to selective schools, and where admission of medium-ability types is decided in a way affected by alphabetical sorting. Hence, the high-ability "Z" students admitted to highly selective programs should mix with both high and medium-ability "A" students. We test this implication using a national study-achievement test administered to the student population graduating from secondary schools in 1999 and find evidence fully consistent with the alphabet-based sorting hypothesis. We also find some evidence that conditional on low education attainment, i.e. not being admitted to higher schooling levels, wages (and presumably ability) are higher for workers sorted low in the alphabet, presumably as low-ability "A" students mix with low- and medium-ability "Z" students.

Throughout our analysis we also test for the importance of the alphabetical position of the first-name initial, thus providing a natural check on our main results. We have no explanation for why the first-name initial should affect education outcomes and we do not find the first-name initial to have any explanatory power. Our findings are also robust in the use of different measures of one's position in the alphabet.

Should our interpretation of the empirical findings be correct, there would be a non-negligible negative effect of apparently non-discriminatory practices for individuals with last names towards the bottom of the alphabet. Rationing of public services based on a lottery is optimal, but the use of a fixed "lottery ticket", i.e. one's last name initial, throughout many lotteries (many schooling levels) is not fair. A simple remedy is to assign each application a numerical code at random and base sorting on this alternative lottery.

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