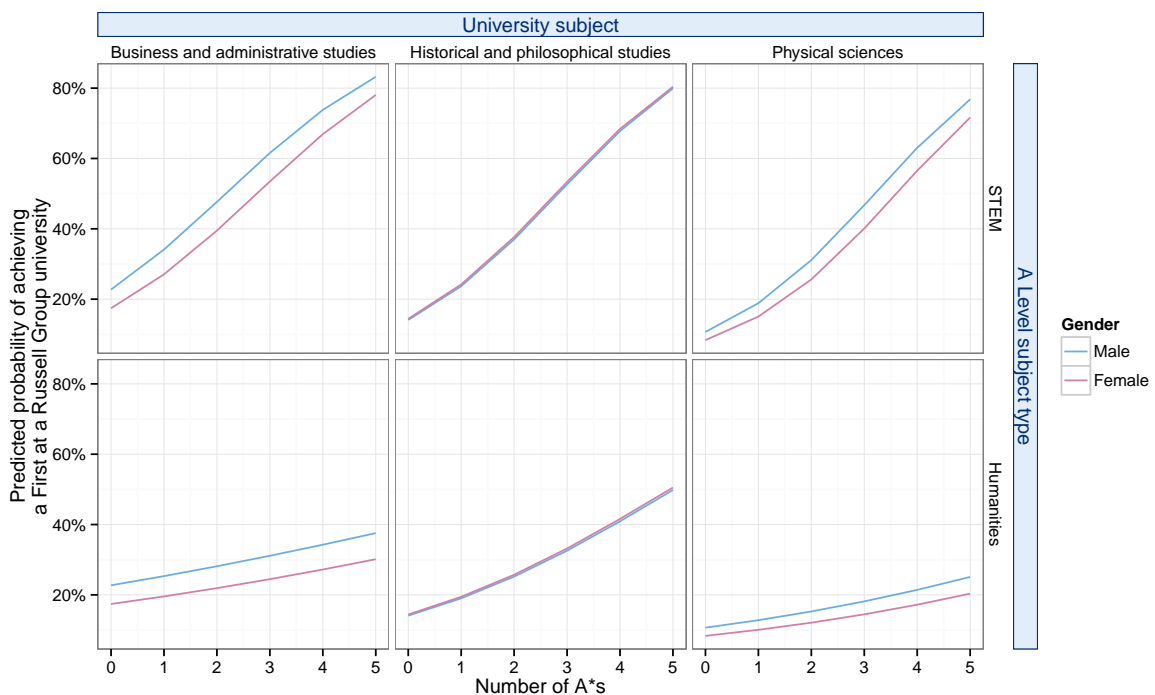# The effect of A* as a predictor of university performance

Summary

In summer 2010, the A* grade at A Level was awarded for the first time. This grade was introduced to help higher education institutions differentiate between the highest achieving candidates. Here we examine the effect of achieving A* grades in different A Level subjects on the probability of being awarded a First class degree from a Russell Group university and show that the A* is indeed a good predictor of achieving a top university degree.

What does the chart show?

The chart shows the predicted probability of achieving a First class degree from a Russell Group university in three subject areas: business and administrative studies, historical and philosophical studies, and physical sciences. In the top row of the chart, we can see the effect of achieving 0 to 5 A* grades in Science, Technology, Engineering and Mathematics (STEM) A Level subjects; the bottom row shows the effect of achieving 0 to 5 A* grades in Humanities A Level subjects. In both rows, it is assumed that no A* grades were achieved in other A Level subject areas. The results are also differentiated by gender.

The predicted probabilities are calculated using a multi-level logistic regression model calibrated on the performance of 65150 students with three or more A Levels, who started a full-time first degree in the 2010/11 academic year and completed it in the 2012/13 academic year. The data set includes students who attended both Russell Group and non-Russell Group universities. The results presented here give predicted probabilities for students from Comprehensive schools.

Why is the chart interesting?

There are two notable results in this chart. First, the number of A* grades awarded in A Level subjects significantly increases the likelihood of a student achieving a First class university degree. This influence is particularly strong when considering A* grades in STEM A Level subjects; A* grades in Humanities A Level subjects do not have as large an effect. Secondly the effect of gender varies by university subject with no significant difference between males and females in historical and philosophical studies, but a significant difference in the other two university subjects.

Further information

More details on the data and methods behind this chart can be found in '*The role of the A* grade at A Level as a predictor of university performance in the United Kingdom*' by Cambridge Assessment researchers Carmen Vidal Rodeiro and Nadir Zanini, published in the *Oxford Review of Education* (2015).