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A Statistical Analysis of Students' Time-To-Degree at the Department of Mathematics

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Abstract

This study aims to identify factors that are associated with students' time-to-degree, such as gender, age and grade in Mathematics I, as well as to build a model for predicting students' degree completion within a time period. The sample subjects are first-time, full time undergraduate programme students who entered the Department of Mathematics at Stockholm University between autumn 2007 and autumn 2013. Binary logistic regression analysis is implemented to study whether students obtained a bachelor degree within three years or not. We utilize also ordinal logistic regression analysis to study students' time-to-degree more specifically, which means that we are not only interested in students' degree completion within three years, but also students' degree completion within seven terms as well as within eight terms. A binary logistic regression model and a proportional odds model have been developed. The results have shown that gender, programme, grade in Mathematics I and that whether students finished Mathematics I within the same term are highly associated with students' time-to-degree in both models. That whether students finished Mathematics I within the same term has the strongest effect in terms of an odds ratio. The discussion focuses on explaining the effects of the influential factors and giving suggestions for future studies.

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