

PLS-SEM Model of Students' Attitudes toward Statistics, Reasoning of Statistics, Self-Efficacy, Motivation and Academics Performance.

- **Author(s):** Norsyadzila Mustafa ,Zulkifley Mohamed ,Nor Hasbiah Ubaidullah ,Akhsanul In'am ,Ahmad
- **Abstract:** A strong statistical reasoning command and other factors will revise the academic performance of undergraduate studies, thereby strengthening their future perspective in the field of scientific activities, particularly in higher education interest. This study is aimed at establishing and examining a structural model for the association involving students' attitude and belief toward statistics, academics motivations, self-efficacy, statistical reasoning and students' academic performance. Bachelor of Mathematics Education students from Sultan Idris Education University Malaysia were selected as a sample comprised of a total of 99 students using a systematic sampling technique. The study employed the technique of PLS-SEM (Partial Least Squares: Structural Equation Model) in developing the academic performance model due the limited sample size and therefore the conventional technique of SEM-AMOS (Structural Equation Model: Analysis of Moment Structure) are not feasible to be applied. The findings revealed that empirical data validated the model established, along with previous observations and the background of theoretical. All the associations within the developed model were substantial, thus successfully confirming all the indicator variables specified in the constructs by employing PLS-SEM. It can be concluded that, the association between the students' attitude and belief toward statistics, academic motivations, self-efficacy, reasoning of statistics, and academic performance was represented in lowerorder as well as hierarchical component in PLS-SEM, contributing to student academic success and being upheld empirically.
- **Keywords:** Partial Least Squares, Structural Equation Model, systematic sampling technique.