



813/E1

Analysis of the University of Sri Jayewardenepura students' academic performance according to the gender and Z-Scores at the A/L

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The main objective of this study was to find out the association between Z-scores and the students' academic performance to identify the effectiveness of the current university admission criterion. There are various factors such as district, gender, income, and family background playing significant roles in this respect. We based the study on four year entrants from 2003-2006 to the Faculty of Management Science and Commerce (FMSC) and to the Faculty of Applied Sciences (FAS) at the University of Sri Jayewardenepura. Both faculties have adopted the GPA system to determine students' results at the beginning of this period.

Individual Z-scores and students' personal data were obtained from the student affairs branch of the university while students' examination performance was collected from FMSC and FAS. Graphical methods such as scatter plots, pie charts and bar charts were drawn and they gave a reasonable picture of the situation demonstrating various trends such as the effect of district basis. However, we limit our analysis here only to gender and Z-score.

Clearly, female students have secured a greater percentage of first classes in both faculties. Standard statistical tests on proportions support this conclusion very strongly for each faculty in each year after 2003. In fact we could say that the females have secured more honors classes, be it first, upper second or lower second. There is a visible tendency of male students aspiring to reach the ordinary pass level. Bar charts for failure rates show that the percentage failure for males is much higher than that of females for every year. Statistical tests on proportions confirm this with overwhelming evidence in each year. In addition, the number of females entering to both faculties has increased significantly during the last year, perhaps the recent trend. Since these facts are true for both faculties, we should next investigate the reasons for poor performance of male students with the intention of minimizing the factors distracting them from academic work.

When studying the relationship between Z-scores and the students' performance, taking the median Z-score of each faculty into consideration, we divided students into two categories as follows. For the FAS those who received Z-scores greater than or equal to 1.4 were taken as in the high Z-score category while for the FMSC those who received Z-scores greater than or equal to 2.0 were taken as in the high Z-score category. As expected, first and upper



second classes in the high Z-score category for both faculties are high in number as well as when we consider it as a percentage within each category. Theoretically, there should be a strong positive correlation between high Z-scores and honors classes. However, the Spearman correlation coefficient between the two variables: Z-score category (low category, high category) and the result (fail, pass, lower second class, upper second class and first class) is less than 0.4 in each faculty, in each year. Thus, such an obvious correlation is not visible, according to our analysis, making A-level selection criterion somewhat questionable.