Conclusio

This study is an attempt to estimate the causal scholastic relationships between GRE score and its determinants (initial verbal and quantitative score, percentages of 10th and 12th, parental income and number of hours/day given outside the classroom coaching.

Empirical analysis of the data through Estimated Multiple Regression Equation was conducted. It was found that the overall model is highly significant. All other coefficients of determinants are highly significant except percentage of 12th. The coefficient of percentage of 12th is small; hence, its contribution is less. Also, family income versus GRE score relationship is negative. This is significant too. Family income and 10th grade
marks are most important in estimating GRE score. Ranking of GRE performance is reported.

Using the multiple regression equation, all residuals (722) were calculated and the highest positive residual was observed.

The estimation of the best student is done by Highest Positive Residual model. The student who got the highest positive residual was concluded to be the best student, even though student’s score was not the highest. The predicted value as per regression model is calculated and based on mean score it is estimated. The original values of Y (GRE score) and its determinants related with this highest positive residual was a standard combination for relevant policy purpose.

The effectiveness of coaching is calculated through comparative means equation (dummy variable). The difference between means is positive and significant with 100% confidence level. Hence it is concluded that the coaching is effective and beneficial.

This educationometric study forecasts and controls the determinants of the aptitude test – Graduate Record Exam (GRE). And, this research finding is also applicable to other similar tests designed by Educational Testing Service (ETS), New Jersey, USA with Graduate Management Test(GMAT) and Scholastic Aptitude Test(SAT).

Forecasting of the final score of a student entering is estimated based on estimated regression model. Similarly, for other possible combinations, the GRE score can be forecasted based on estimated regression model.
Controlling of the score is estimated by Regression Equation. The only controlling parameter in the equation is the time that a student spends outside the class to study, keeping all other parameters constant. Through the results estimated by Regression Equation, it is observed that sometimes students cannot get desired score even if they study for 24 hours. Also sometimes even with good marks in 10th grade and other positive factors, one may not get a great GRE score in the final exam. The reason may be related to anxiety during exam, accident or death in the family or may be illness during or before exam.

The data analysis made it clear that through proper coaching a good score can be achieved by students. This research can be used to know the extent to which coaching helps in the preparation of standardized tests. A significant improvement is observed in the scores of students from the day they join the class to the day they take the final test. These better results are because of time spent at coaching for greater clarity of the fundamentals, practice-drills, psychological support, exposure to real exam, and weaknesses improvement. The results show that the most important controlling factor after a student joins is the time utilized at and after the coaching. In general, the results are very significant and can be used in policy making.

Hence, the causal educationometric analysis that estimates the relationship between GRE score and its determinants is useful for predicting the GRE core and controlling the maximum possible determinants especially the study hours to increase the score. The coaching is significantly useful. The relative
causal ranking of the performance is also useful in the relevant policy analysis. Also, this research work could be used for human resource management of the students approving for GRE and other such examinations.