Applying Game Theory, Statistics and Linear Algebra to Real Life Situations

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The researcher intends to apply the combination of different types of mathematical concepts such as Linear Algebra, Statistics and Game Theory in economic situations of real life. Game theory is used to study interactions between players and develop strategies in order to find the best result in a given situation. The method known as the Nash Equilibrium Theory was applied, in this method the data is placed in matrices and with the help of a spreadsheet and statistical analysis, it was determined when it is the best time that players must do their decisions and improve their profit. With the probabilistic analysis found for the cases studied, the Nash equilibrium provides that if both players promote their items they will both achieve a significant increase on their own benefit. This implies that the best strategy that can develop both players has to be for equal benefit, regardless of what the other player chooses. Considering these findings, this method could be useful for improving the economy in other real life cases.

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