Analyzing the Value of a Lego Investment Based on the Set's Factors

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Lego, like many other alternative investments, increases in value over time, with some sets increasing more than gold since 2000 (Wolff-Mann, 2015). However, what makes certain sets increase more than others? Is it the year the set was released, the theme the set is based off of, the number of minifigures, or the number of pieces? Using a variety of statistical analysis tests based on data from over 100 Lego sets, this project attempted to find what single factor influenced the appreciation value of a set the most. The hypothesis for the project was that as the size and number of minifigures of a set increase, the value of appreciation will increase, because these are the most valuable elements of a set for collectors. The null hypothesis was that there was no clear correlation between the elements of a set and its appreciation value. Lego set data was collected from Brickset and BrickLink, including release price, release year, number of pieces, number of minifigures, theme, and current price, for nearly 150 sets. This data was then analyzed using ANOVA and T-tests to find which factor had the greatest impact on a set’s increase in value. Only the year a set was released was significant ($f(5)=4.60178$, $p=0.00068$), with sets released during the Classic and System Eras having the greatest increase in value (1399.5033% and 367.3761% respectively). However, more tests should be conducted with a larger sample group to confirm these results.

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