

# Linear Regression for Business Statistics

- Conceptual understanding
- Various business applications



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# Linear Regression for Business Statistics

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## Example

There is a Sales manager of a toys retail company which sells various kinds of toys in the local market. This sales manager needs to make some kind of projections about the number of monthly units that the retail company will be able to sell of this particular toy in the coming half year. In the past she has been making such projections based on her gut feeling and now wishes to be a little more scientific about the whole process.

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## Overview of Regression

1. Modeling
2. Estimation
3. Inference
4. Prediction

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4. **Prediction**      *Making predictions about the variable of interest*





# Linear Regression for Business Statistics

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### **Example** (continued...)

Based on her experience, the manager figures out that the monthly unit sales depend on three important variables, the price at which the toy is sold, the monthly amount that the company spends on advertising the toy and the monthly amount spent on promotions for the toy.

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### **Variable of interest**

“Y” variable

“Dependent” variable

“Response” variable

“Regressed” variable

“L.H.S.” variable



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\*\*\* A linear relationship \*\*\*