Chapter Seventeen

HYPOTHESIS TESTING

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Types of Hypotheses

- Null
  - that no statistically significant difference exists between the parameter and the statistic being compared
- Alternative
  - logical opposite of the null hypothesis
  - that a statistically significant difference does exist between the parameter and the statistic being compared.

Logic of Hypothesis Testing

- Two tailed test
  - nondirectional test
  - considers two possibilities
- One tailed test
  - directional test
  - places entire probability of an unlikely outcome to the tail specified by the alternative hypothesis

Decision Errors in Testing

- Type I error
  - a true null hypothesis is rejected
- Type II error
  - one fails to reject a false null hypothesis

Testing for Statistical Significance

- State the null hypothesis
- Choose the statistical test
- Select the desired *level of significance*
- Compute the calculated difference value
- Obtain the *critical value*
- Interpret the test