Why estimation?

Two reasons:

- **Infinite** populations → incapable of complete examination

- **Finite** populations → cost, time

In addition, estimation can help not to defer a conclusion, until the entire population has been observed

Parameters to be estimated?

- Population **mean**

- Population **proportion**

- Population **variance**

- The **difference** between 2 means

- The **difference** between 2 proportions

- The **ratio** of 2 variances

Estimation *vs*. Hypothesis Testing

1. The differences between these two procedures?

2. Pros & Cons of these two procedures?