University of Waterloo STAT 332 – W. H. Cherry

## Figure 2.15. UNSTRATIFIED POPULATIONS: One-Stage EPSWOR of Individual Elements Estimating the Ratio of Two Averages or Totals

## Section headings to provide a content overview

- 1. Illustrations
- 2. Statistical Properties of  $R = \overline{Y}/\overline{X}$  Preliminaries
- 3. Statistical Properties of  $R = \overline{Y}/\overline{X}$  Estimating Bias
- 4. Statistical Properties of  $R = \overline{Y}/\overline{X}$  Standard Deviation
- 5. Confidence Intervals for  $\mathbf{R}$  and the Effect of Estimating Bias
  - Example 2.15.1
  - Example 2.15.2
  - Example 2.15.3
- 6. Appendix 1: Approximations Based on Taylor Series Expansions
- 7. Appendix 2: Another Derivation of the Estimating Bias of  $R = \overline{Y}/\overline{X}$
- 8. Appendix 3: Effect of Estimating Bias on Coverage Probability

Four tables

Five diagrams

Twenty-seven equations

2023-08-20