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*I*  $\rho_{cs}$

$$\left(\frac{C_1}{C_2}\right)$$

$$M = \sqrt{\frac{C_1}{C_2} \times \frac{1-\rho}{\rho}}$$

$$Deff = 1 + n_{cs}[M - 1]$$

$$N_{cs} = N_{srs} \times Deff_{cs}$$

*Deff<sub>cs</sub>*

Single-stage Cluster Sampling

Stratified random sampling

$$N_i = N_{srs} \times D_i$$

$N_i$

$D_i$

(M)

Design Effect (Deff)

$$I = \frac{S_i}{N_i}$$

$N_i$

$S_i$

Interclass

Correlation Coefficient ( $\rho_{cs}$ )

*I*

( ) :

(I)  $N_{srs} = \frac{Z^2_{1-\alpha/2} [P \times (1-P)]}{d^2}$

( $\alpha$ )

$\alpha+I$

$$n = \frac{N}{M} = 34$$

$\alpha+(n-1)I$

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$$I = \frac{Si}{Ni}$$

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Construction )

Factorial )

(validity  
(Analysis

Reliability test

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