

Lampiran 7 Hasil Perhitungan Manual Chi square

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

$$Ea = \frac{(a+b)x(a+c)}{N} \quad Eb = \frac{(a+b)x(b+d)}{N}$$
$$Ec = \frac{(c+d)x(a+c)}{N} \quad Ed = \frac{(c+d)x(b+d)}{N}$$

$$X^2 = \frac{(Oa - Ea)^2}{Ea} + \frac{(Ob - Eb)^2}{Eb} + \frac{(Oc - Ec)^2}{Ec} + \frac{(Od - Ed)^2}{Ed}$$

$$Ea = \frac{35 \times 37}{70} = \frac{1295}{70} = 18,5$$

$$Eb = \frac{35 \times 33}{70} = \frac{1155}{70} = 16,5$$

$$Ec = \frac{35 \times 37}{70} = \frac{1295}{70} = 18,5$$

$$Ed = \frac{35 \times 33}{70} = \frac{1155}{70} = 16,5$$

$$\chi^2 = \frac{(11 - 18,5)^2}{18,5} + \frac{(24 - 16,5)^2}{16,5} + \frac{(26 - 18,5)^2}{18,5} + \frac{(9 - 16,5)^2}{16,5} = 12.899$$