

Bab 7

Bentuk Distribusi Data

Kompetensi:
Mahasiswa mampu
menganalisis bentuk distribusi
data untuk gejala ekonomi

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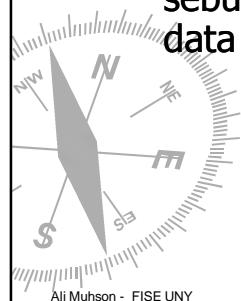
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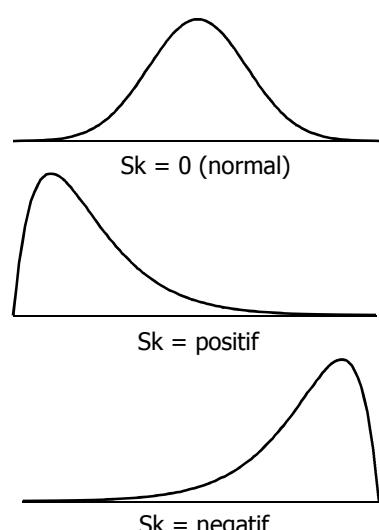
Bentuk Distribusi Data

► Skewness

- Ukuran kesimetrisan/kemiringan sebuah distribusi data



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Mengukur Skewness

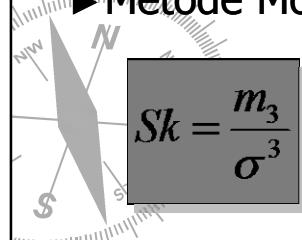
► Metode Pearson

$$Sk = \frac{\bar{X} - Mo}{SD}$$

Atau

$$Sk = \frac{3(\bar{X} - Md)}{SD}$$

► Metode Moment



$$Sk = \frac{m_3}{\sigma^3}$$



$$m_2 = \frac{\sum(X - \bar{X})^2}{n}$$

$$m_3 = \frac{\sum(X - \bar{X})^3}{n}$$

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Mengukur Skewness

► Software Method

$$sk = \left(\frac{m_3}{\sigma^3} \right) \left(\frac{\sqrt{n(n-1)}}{n-2} \right)$$

$$sk = \frac{n}{(n-1)(n-2)} \sum \left(\frac{X - \bar{X}}{SD} \right)^3$$

A diagram of a bell-shaped normal distribution curve. The horizontal axis is labeled with 'S' (standard deviation) and 'M' (mean). The area under the curve is shaded and labeled 'N'.

$$SE_{sk} = \sqrt{\frac{6}{n}}$$

$$SE_{sk} = \sqrt{\frac{6n(n-1)}{(n-2)(n+1)(n+3)}}$$

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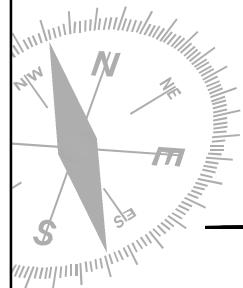
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Bentuk Distribusi Data

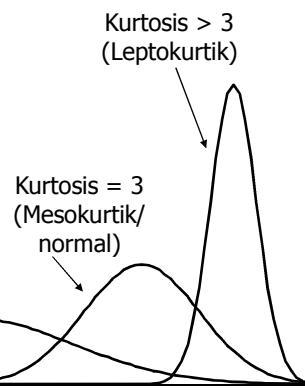
► Kurtosis

- Ukuran kemenjuluran/kerampingan sebuah distribusi data



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Kurtosis < 3
(Platikurtik)



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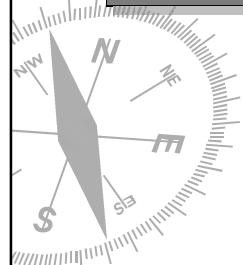
Mengukur Kurtosis

► Metode Moment

$$k = \frac{m_4}{\sigma^4} - 3$$



$$m_4 = \frac{\sum (X - \bar{X})^4}{n}$$



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Hal. 7-6

Mengukur Kurtosis

► Software Method

$$k = \left(\frac{n-1}{(n-2)(n-3)} \right) \left[(n+1) \left(\frac{m_4}{\sigma^4} - 3 \right) + 6 \right]$$

$$SE_k = \sqrt{\frac{24}{n}}$$

$$SE_k = 2 SE_{sk} \sqrt{\frac{n^2 - 1}{(n-3)(n+5)}}$$

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