

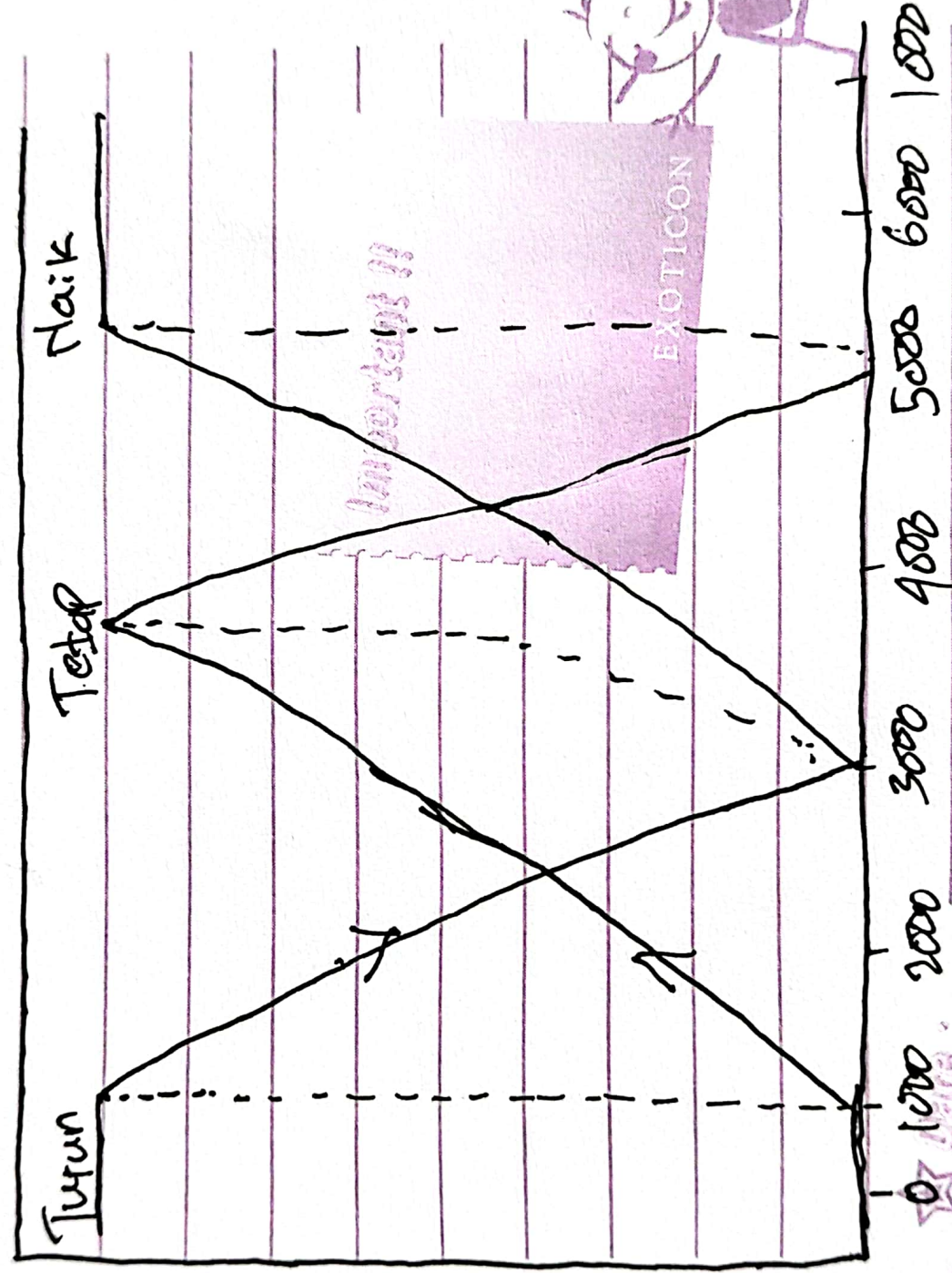


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Today's
Observation:

Perminintaan



$x_{min} = 1000$ $x_{mid} = 3000$ $x_{max} = 5000$

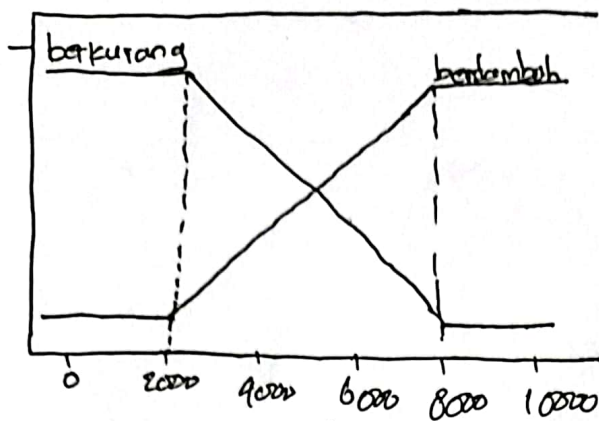
$H_{turun}[x]$

$1 \leq x \leq 1000$

$\frac{3000 - x}{3000 - 1000}$, $1000 \leq x \leq 3000$

$1 \leq x \leq 3000$

* Produksi



$$\mu_{\text{bertambah}}(z) = \begin{cases} 0 & z < 2000 \\ \frac{z-2000}{8000-2000}, & 2000 \leq z \leq 8000 \\ 1 & z > 8000 \end{cases}$$

$$\mu_{\text{bertambah}}(z) = \begin{cases} 0 & z < 2000 \\ \frac{z-2000}{8000-2000}, & 2000 \leq z \leq 8000 \\ 1 & z > 8000 \end{cases}$$

Rule:

- IF Turun dan sedikit then bertambah (R1)
- (R2) IF Turun dan sedang then berkurang
- (R3) Turun, banyak, berkurang
- (R4) Tetap, sedikit, bertambah
- (R5) Tetap, sedikit, berkurang
- (R6) Tetap, banyak, berkurang
- (R7) Naik, sedikit, bertambah
- (R8) Naik, sedang, bertambah
- (R9) Naik, banyak, berkurang

Diketahui:

Pertimbangan

$$\mu_{\text{Pintu Turun}} = -0,25$$

$$= 0$$

$$\mu_{\text{Pintu Tetap}} = 0,75$$

$$\mu_{\text{Pintu Naik}} = 0,25$$

Persediaan

$$\mu_{\text{Psd sedikit}} = 0,5$$

$$\mu_{\text{Psd sedang}} = 0,5$$

$$\mu_{\text{Psd Banyak}} = 1,5$$

$$= 0$$

$$(R1) \text{ x-Predikat} = \mu_{\text{Pintu Turun}} \wedge \mu_{\text{Psd sedikit}}$$

$$= \min(\mu_{\text{Pintu Turun}}[2000] \wedge \mu_{\text{Psd sedikit}}[500])$$

$$= \min(0; 0,5)$$

$$= 0$$

Dari himpunan berkurang

$$Z_1 = 2000$$

$$(R2) \text{ predikat} = \mu_{\text{Pintu Turun}} \wedge \mu_{\text{Psd}}$$

$$= \min(\mu_{\text{Pintu Turun}}[3500] \wedge \mu_{\text{Psd sedang}}[300])$$

$$= \min(0; 0,5)$$

$$= 0$$

- Dari himpunan berkurang

$$Z_2 = 8000$$

$$M \text{ Tetap} [x] = \begin{cases} 0 & x \leq 1000 \\ \frac{x-1000}{3000-1000} & 1000 \leq x \leq 3000 \\ \frac{5000-x}{5000-3000} & 3000 \leq x \leq 5000 \\ 1 & x \geq 5000 \end{cases}$$

$$M \text{ Naik} [x] = \begin{cases} 0 & x \geq 53000 \\ \frac{x-3000}{5000-3000}, & 3000 \leq x \leq 5000 \\ 1 & x \geq 5000 \end{cases}$$

* Demand

Jika $x = 3500$

$$M_{\text{tatural}}(3500) = \frac{3000-3500}{2000} = \frac{-500}{2000} = -0,25 \approx 0$$

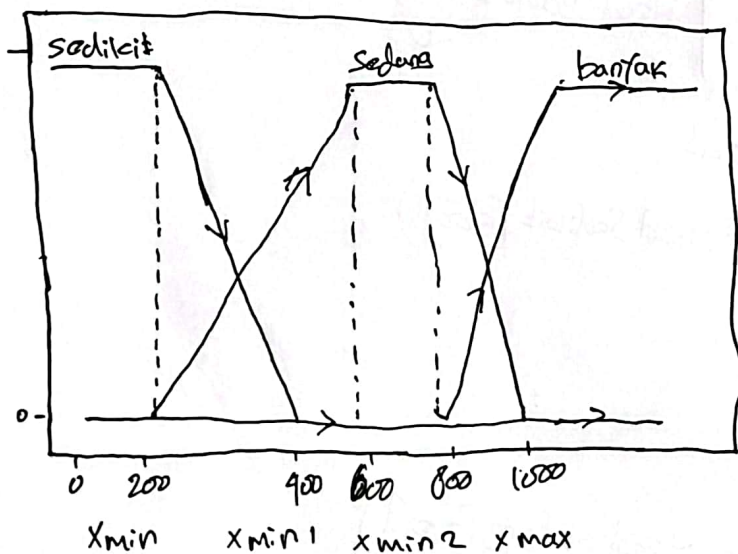
↑
Agar nilai awal

$$M \text{ Tetap} [3500] = \frac{3500-1000}{2000} = 1,25$$

$$M \text{ Naik} [3500] = \frac{3500-3000}{2000} = 0,25$$

nilai ini yang digunakan karena mendekati 0 dan 1

Persediaan



* kondisi baru (sedang)

$$M \text{ sedang} [x] = \begin{cases} 0 & x \leq 200 \text{ or } x \geq 800 \\ \frac{x-200}{400-200} & 200 \leq x \leq 400 \\ \frac{800-x}{800-600} & 600 \leq x \leq 800 \\ 1 & 400 \leq x \leq 600 \end{cases}$$

* SUPPLY

Jika $x = 300$

$$M_{\text{sedikit}} [300] = \frac{400-300}{400-200} = 0,5$$

$$M_{\text{sedang}} [300] = \frac{300-200}{400-200} = 0,5 \leftarrow \text{ini yg digunakan}$$

$$\frac{800-300}{800-600} = 2,5$$

$$M_{\text{banyak}} [300] = \frac{300-600}{800-600} = -1,5 = 1$$

supaya valid

$$\begin{aligned}
 (R3) \alpha\text{-Predikat} &= \text{MPmtTurun} \cap \text{MPsdBanyak} \\
 &= \min(\text{MPmtTurun}[3500] \cap \text{MPsd}[300]) \\
 &= \min(0:0) \\
 &= 0
 \end{aligned}$$

Dari himpunan berkecurang $23 = 8000$

$$\begin{aligned}
 (R4) \alpha\text{-Predikat} &= \text{MPmtTetap} \cap \text{MPsd sedikit} \\
 &= \min(\text{MPmtTetap}[3500] \cap \text{MPsd sedikit}[300]) \\
 &= \min(0,75:0,5) \\
 &= 0,5
 \end{aligned}$$

Dari himpunan bertambah:

$$\frac{24-2000}{6000} = 0,5 \quad \left| \begin{array}{l} 24-2000 = 3000 \\ 24 = 3000 + 2000 = 5000 \end{array} \right.$$

$$\begin{aligned}
 (R5) \alpha\text{-Predikat} &= \text{MPmtTetap} \cap \text{MPsd sedang} \\
 &= \min(\text{MPmtTetap}[3500] \cap \text{MPsd sedang}[300]) \\
 &= \min(0,75; 0,5) \\
 &= 0,5
 \end{aligned}$$

Dari himpunan berkecurang

$$\frac{8000-25}{6000} = 0,5 \quad \left| \begin{array}{l} 8000-25 = 3000 \\ 25 = 8000 - 3000 \end{array} \right.$$

$$\begin{aligned}
 (R6) \alpha\text{-Predikat} &= \text{MPmtTetap} \cap \text{MPsd banyak} \\
 &= (\text{MPmtTetap}[3500] \cap \text{MPsd banyak}[300]) \\
 &= \min(0,75:0) \\
 &= 0
 \end{aligned}$$

Dari himpunan berkecurang
 $26 = 8000$

$$\begin{aligned}
 (R7) \alpha\text{-Prediksi} &= \text{MPmtNaik} \cap \text{MPsd sedikit} \\
 &= \min(\text{MPmtNaik}[3500] \cap \text{MPsd sedikit}[300]) \\
 &= \min(0,25; 0,5) \\
 &= 0,25
 \end{aligned}$$

Dari himpunan $27 = 3500$

$$\begin{aligned}
 (R8) \alpha\text{-prediksi} &= \text{MPmtNaik} \cap \text{MPsd sedang} \\
 &= \min(\text{MPmtNaik}[3500] \cap \text{MPsd sedang}[300]) \\
 &= \min(0,25; 0,5) \\
 &= 0,25
 \end{aligned}$$

Dari himpunan bertambah
 $28 = 3500$

$$\begin{aligned}
 (12g) \quad \alpha\text{-prediksi} &= NP_{\text{mt}} M_{\text{ait}} \cap M_{\text{psd}} B_{\text{antak}} \\
 &= \min(NP_{\text{mt}} M_{\text{ait}} [3500] \cap M_{\text{psd}} B_{\text{antak}} [300]) \\
 &= \min(0,25; 0) \\
 &= 0
 \end{aligned}$$

Jari himpunan berilcut bersaurang

2g : 8020

#2 alih

$$\begin{aligned}
 Z = & (0 \times 2000) + (0 \times 8000) + (0 \times 8000) + (0,5 \times 5000) + 0,5 \times 5000 \\
 & + (0 \times 8000) + (0,25 \times 3500) + (0,25 \times 3500) + (0 \times 8000) \\
 \hline
 & 0 + 0 + 0 + 0,5 + 0,5 + 0 + 0,25 + 0,25 + 0
 \end{aligned}$$

$$\begin{array}{r}
 2 = 6750 \\
 \hline
 1,5
 \end{array}$$

$$2 = 4650 //$$