

Prof. Luiz Paulo Lopes Fávero

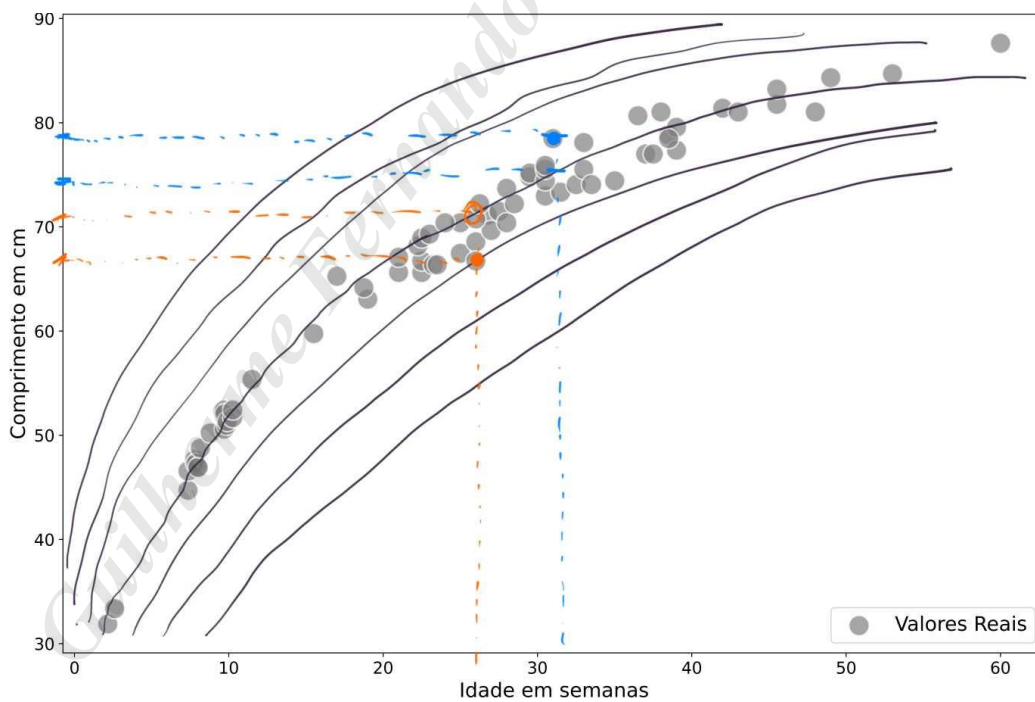
PRINTS REALIZADOS DURANTE A AULA DE 06/08/2024:

Comprimento  
QUANT

idade  
QUANT

$$\hat{\text{Comprimento}}_i = \alpha + \beta \cdot \text{idade}_i$$

Linear?



	coef	std err	t	P> t	[0.025	0.975]
Intercept $\alpha$	43.1004	1.034	41.665	0.000	41.038	45.163
idade $\beta$	0.9411	0.036	25.841	0.000	0.868	1.014

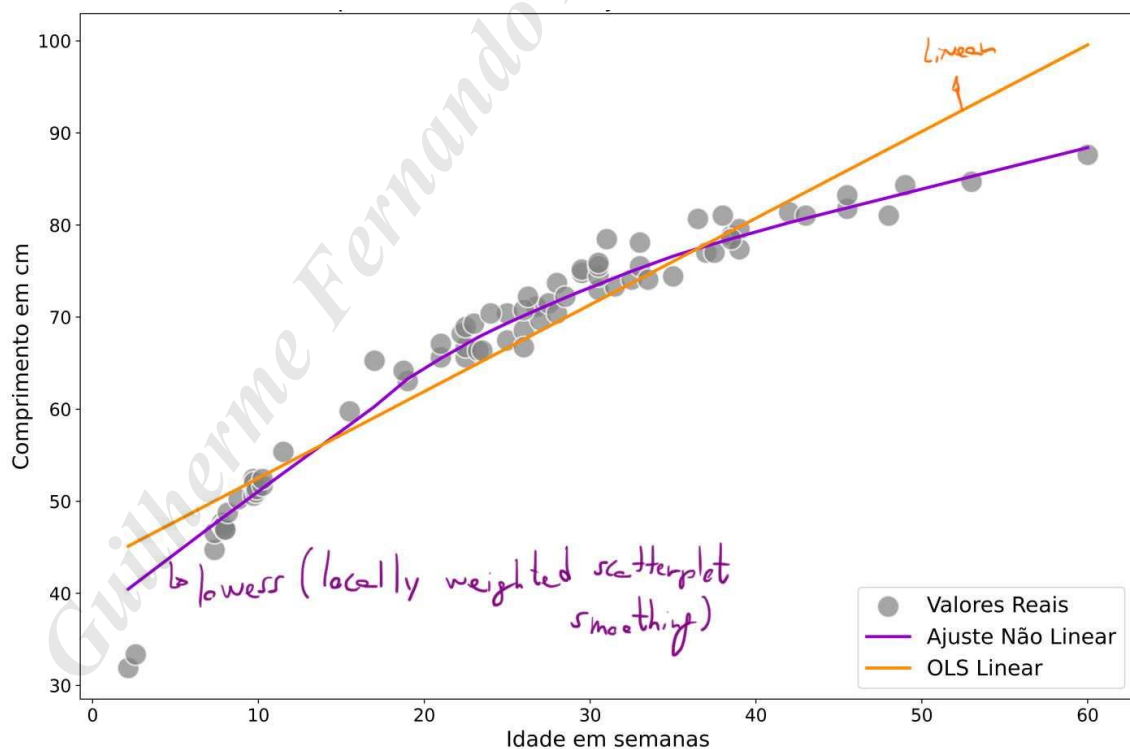
Modelo Linear:

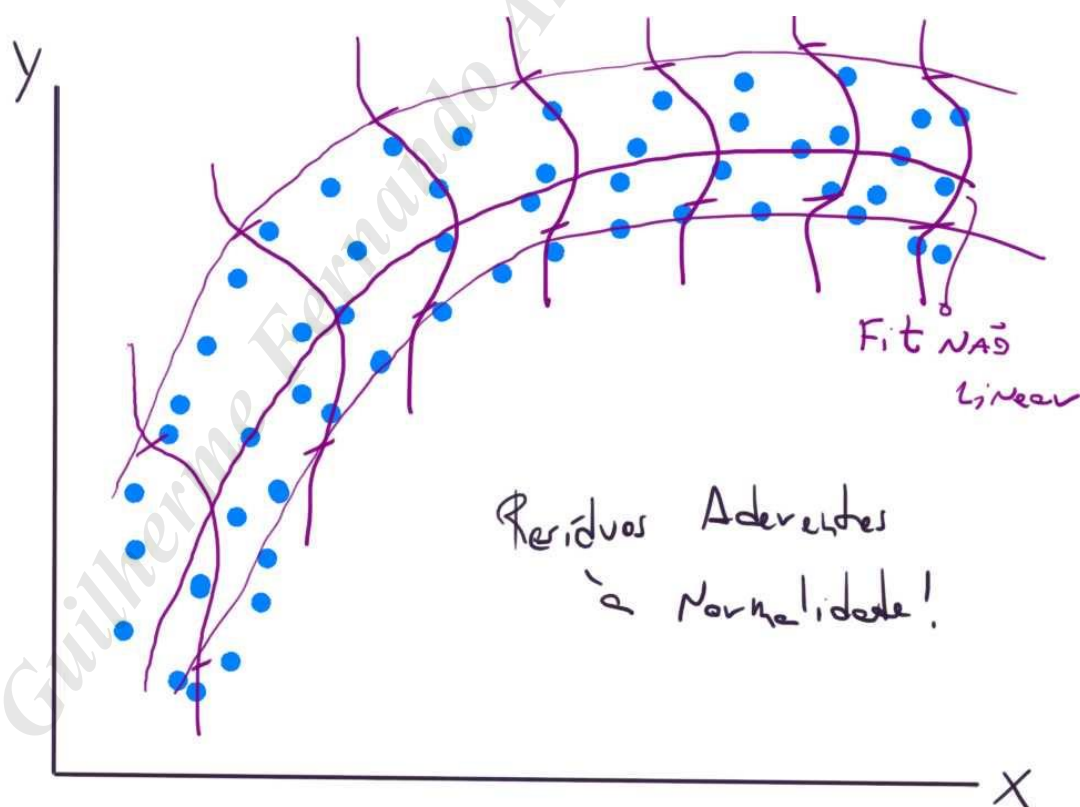
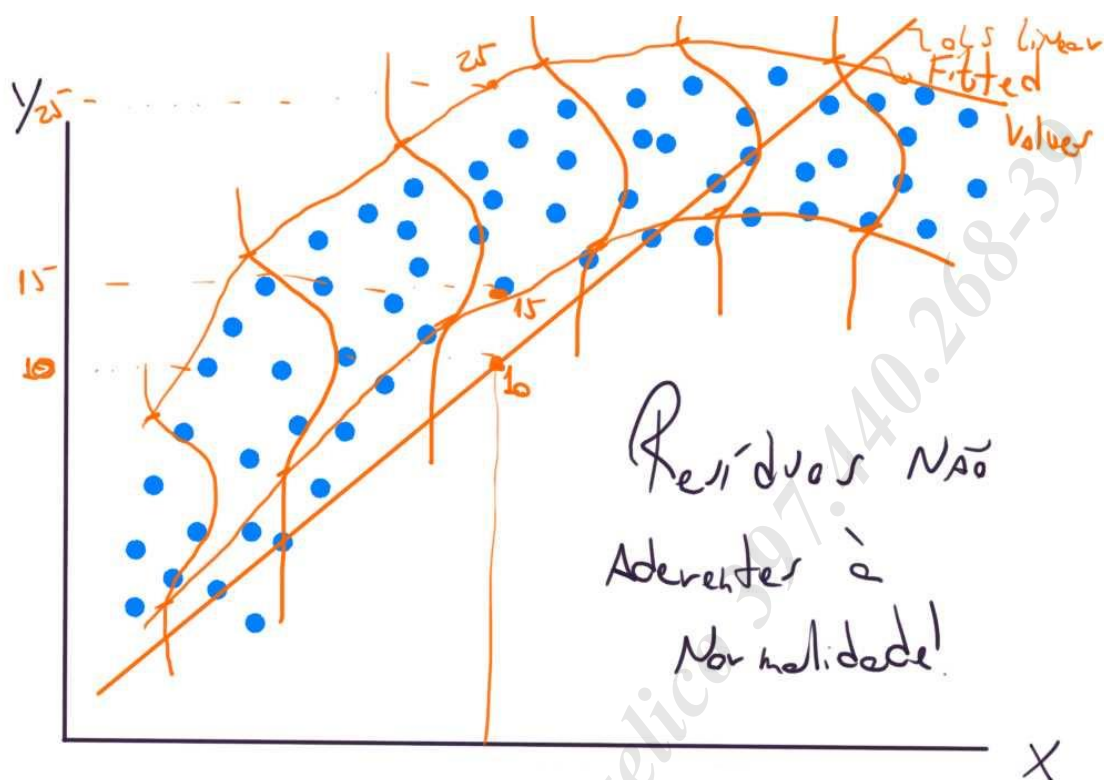
$$\hat{\text{Comprimento}}_i = 43,10 + 0,94 \cdot \text{idade}_i, \quad R^2 = 90,3\%$$

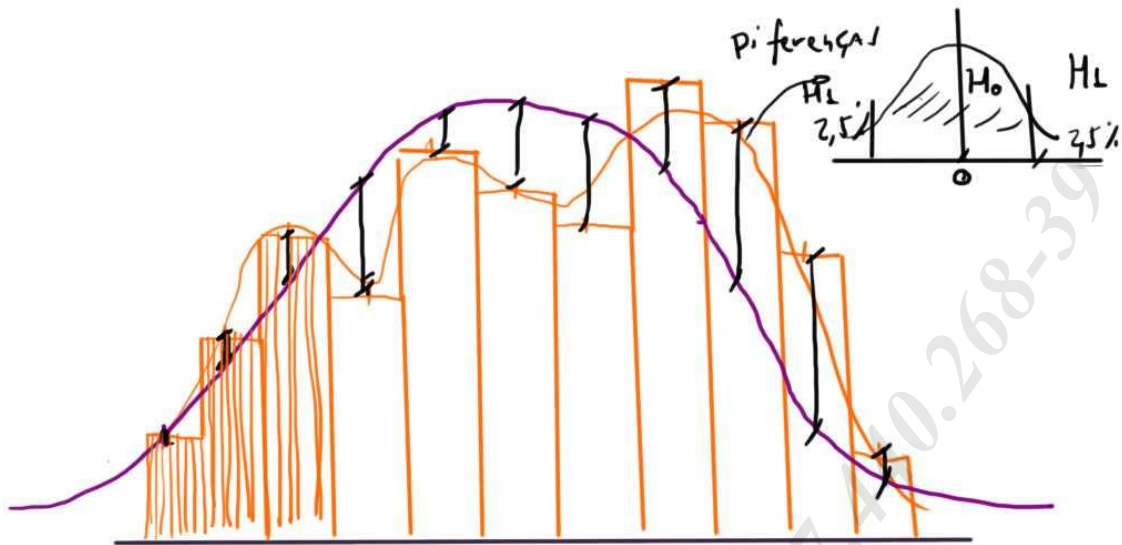
	coef	std err	t	P> t	[0.025	0.975]
Intercept $\alpha$	4995.1602	630.253	7.926	0.000	3738.774	6251.546
idade $\beta$	947.2298	22.189	42.689	0.000	902.997	991.463

Modelo não Linear (Box-Cox):

$$\frac{\hat{\text{Comprimento}}_i^{2,65} - 1}{2,65} = 4995,16 + 947,23 \cdot \text{idade}_i, \quad R^2 = 96,2\%$$







95% Nível  
Confiança

$H_0$ : Não há diferenças entre as distribuições.  
p-value > 0,05. (DIF. NORMAL)

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$H_1$ : Há diferenças entre as distribuições.  
p-value ≤ 0,05 (DIF.  $\vec{N}$  NORMAL)

Box-Cox

$$Y_{Box-Cox}^* = \frac{Y^\lambda - 1}{\lambda}$$

$$Y^* = \frac{Y^\lambda - 1}{\lambda} = \alpha + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \dots + \beta_K \cdot X_K.$$

$\lambda = 1 \rightarrow$  linear

$\lambda = 2 \rightarrow$  quadrático

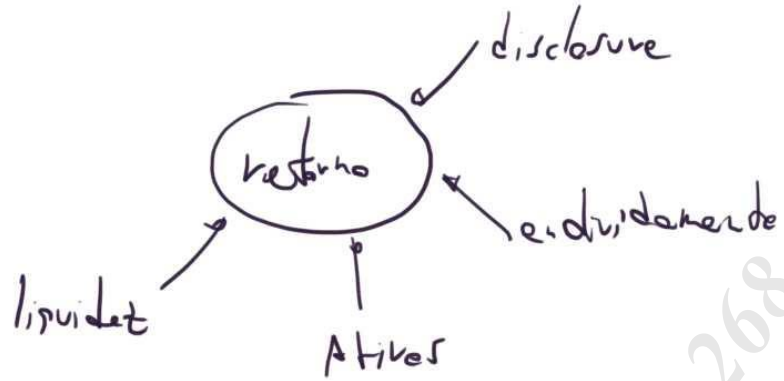
$\lambda = 3 \rightarrow$  cúbico

$\lambda = -1 \rightarrow$  inverso

$\lambda = 0,5 \rightarrow$  raiz

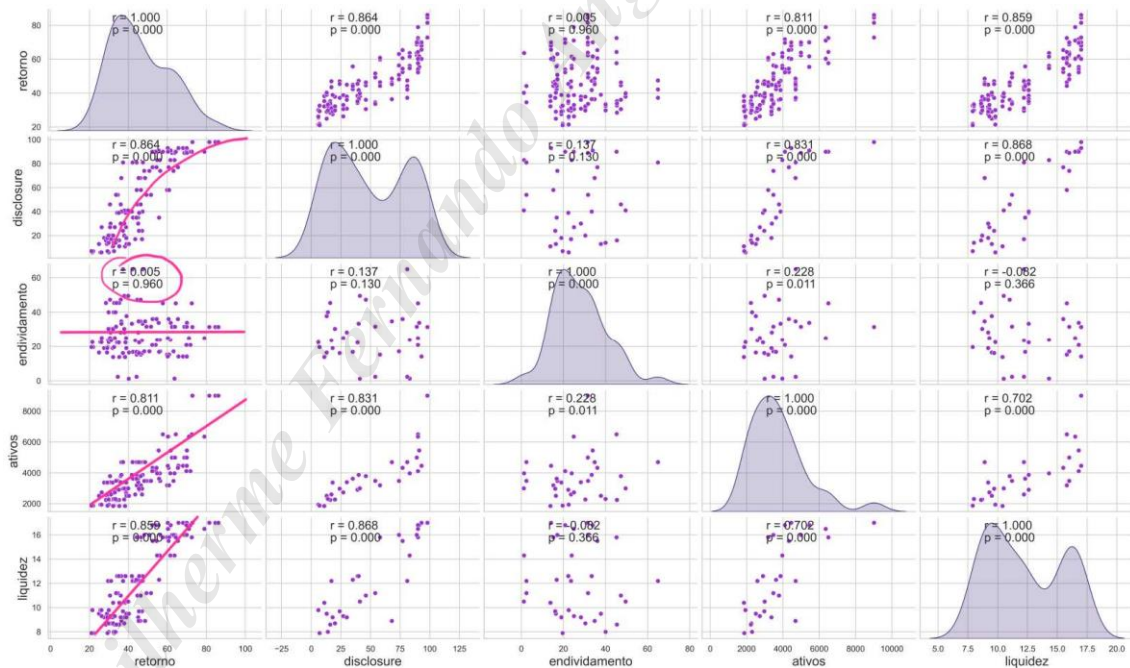
$\lambda = 0 \rightarrow$  logarítmico ( $\ln Y$ ).





$$\text{retorno}_i = \alpha + \beta_1 \cdot \text{disclosure}_i + \beta_2 \cdot \text{endividamento}_i + \beta_3 \cdot \text{liquidez}_i + \beta_4 \cdot \text{Ativos}_i$$

	coef	std err	t	P> t	[0.025	0.975]
Intercept	-2.5348	2.341	-1.083	0.281	-7.169	2.100
Q('ativos')	0.0040	0.001	7.649	0.000	0.003	0.005
Q('liquidez')	2.7391	0.258	10.637	0.000	2.229	3.249



	coef	std err	t	P> t	[0.025	0.975]
Intercept	2.8275	0.072	39.019	0.000	2.684	2.971
Q('disclosure')	0.0031	0.001	3.109	0.002	0.001	0.005
Q('ativos')	4.005e-05	1.43e-05	2.795	0.006	1.17e-05	6.84e-05
Q('liquidez')	0.0398	0.008	5.080	0.000	0.024	0.055

$$\frac{r_{et,t+h_0} - 1}{-0,022} = 2,8275 + 0,0031 \cdot \text{disclosure} + 0,00004 \times \text{ativos} + 0,0398 \cdot \text{liquidez}$$