Understanding S-Shape

Cumulative Sales of Ultrasound Since Introduction (Millions)

$$y = 4.0858e^{0.3225x}$$

Legend: Cummulative Sales — Log (Cummulative Sales) — Expon. (Cummulative Sales)

TIME
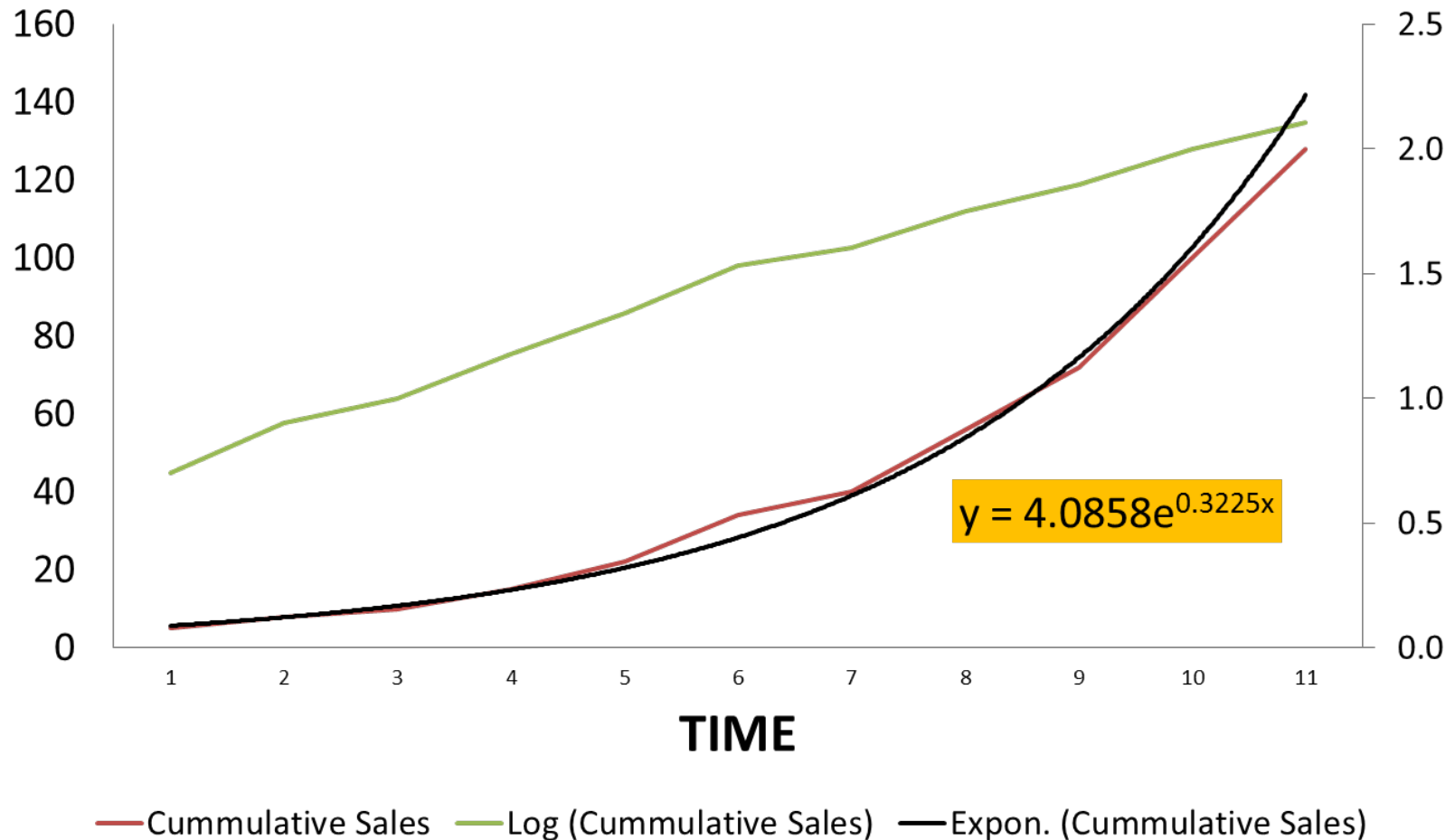
Logistic Regression—How Do We Get the S-Shaped Form?

$$\text{Prob(Retention)} = \frac{e^{(a+b_1 \, PriceDiscount)}}{1 + e^{(a+b_1 \, PriceDiscount)}}$$

Predictions are bound between [0,1]

Choice Probability

*Price Discount on
$877 Price of Miami Flight*