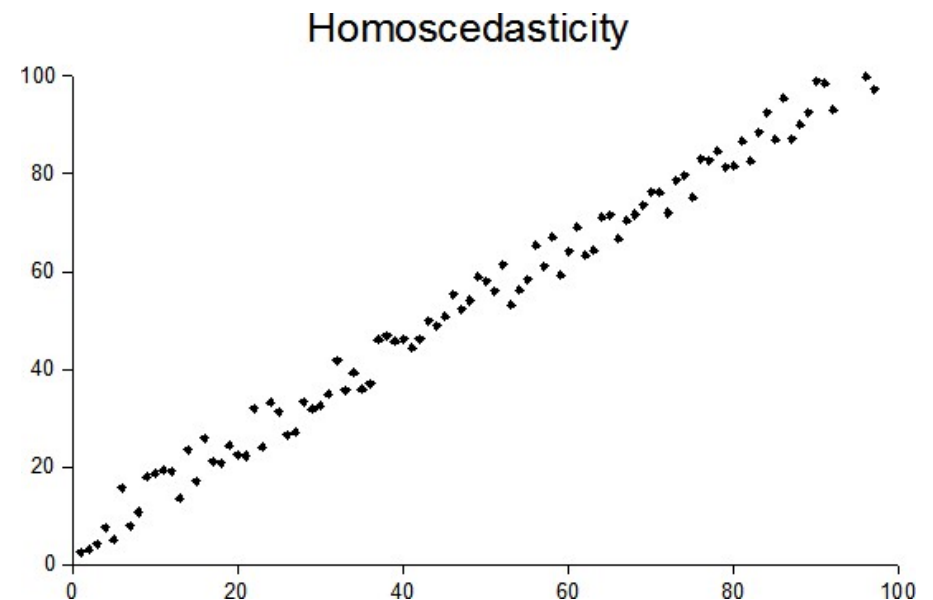


# Homoscedasticity/ Heteroscedasticity In Brief

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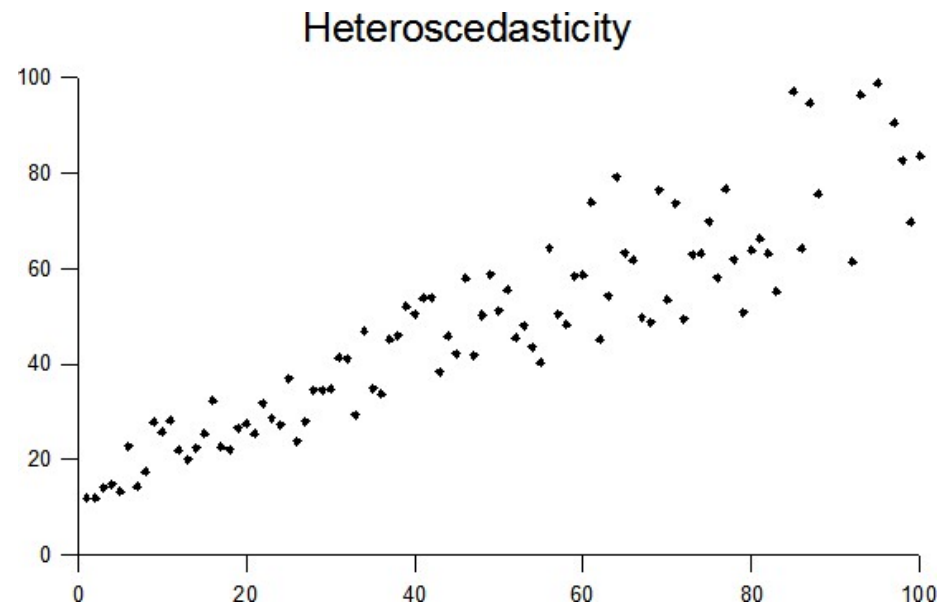
# Homoscedasticity

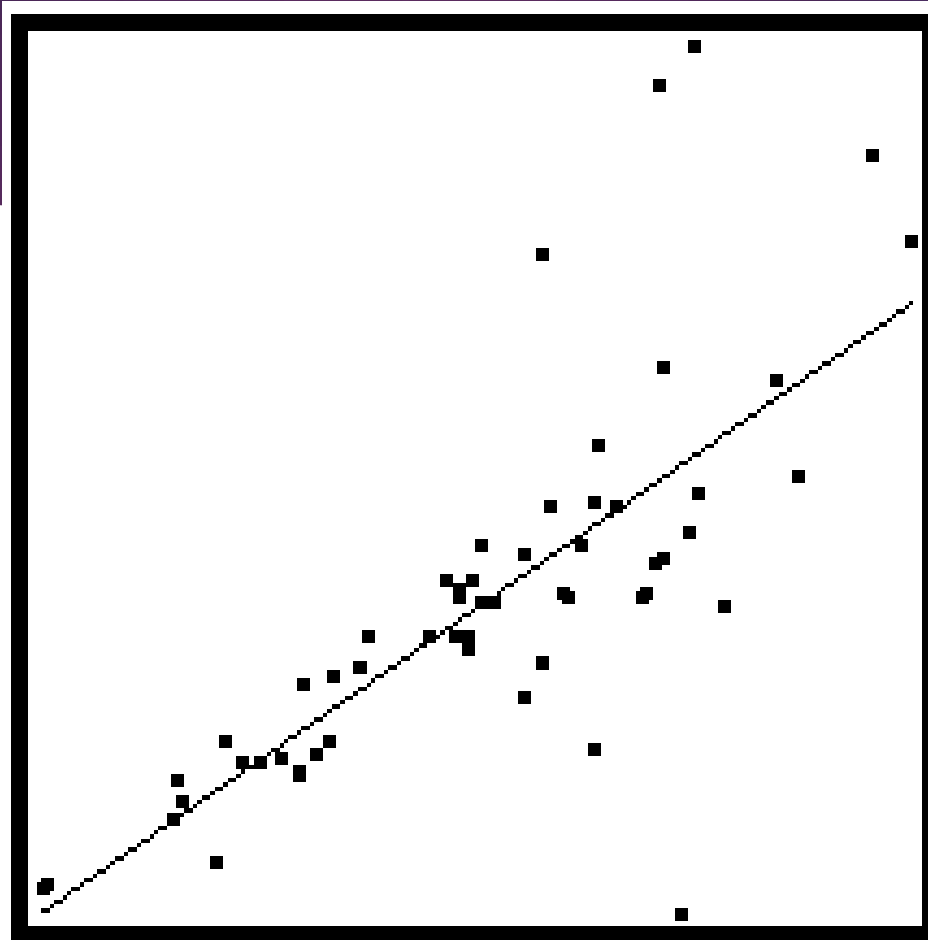
- ▶ **Homoscedasticity** describes a situation in which the error term ( $e$ ; or, the residual) is the same across all values of the independent variable.
- ▶ **Homoscedasticity** is assumed for many statistical tests, and we tend to test for it in many procedures. (Actually the assumption is typically for the population, but of course we test the sample.) We may need to transform one or more variables if we encounter strong heteroscedasticity.

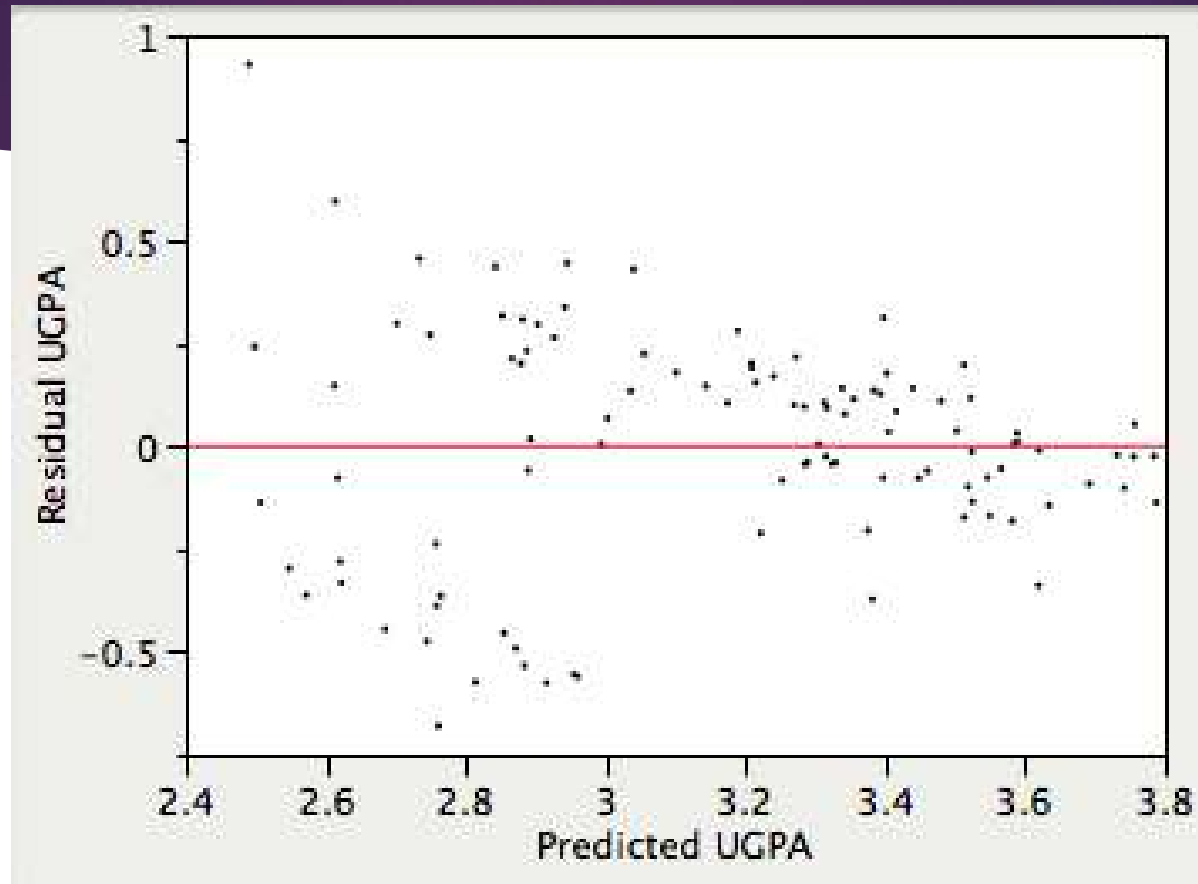


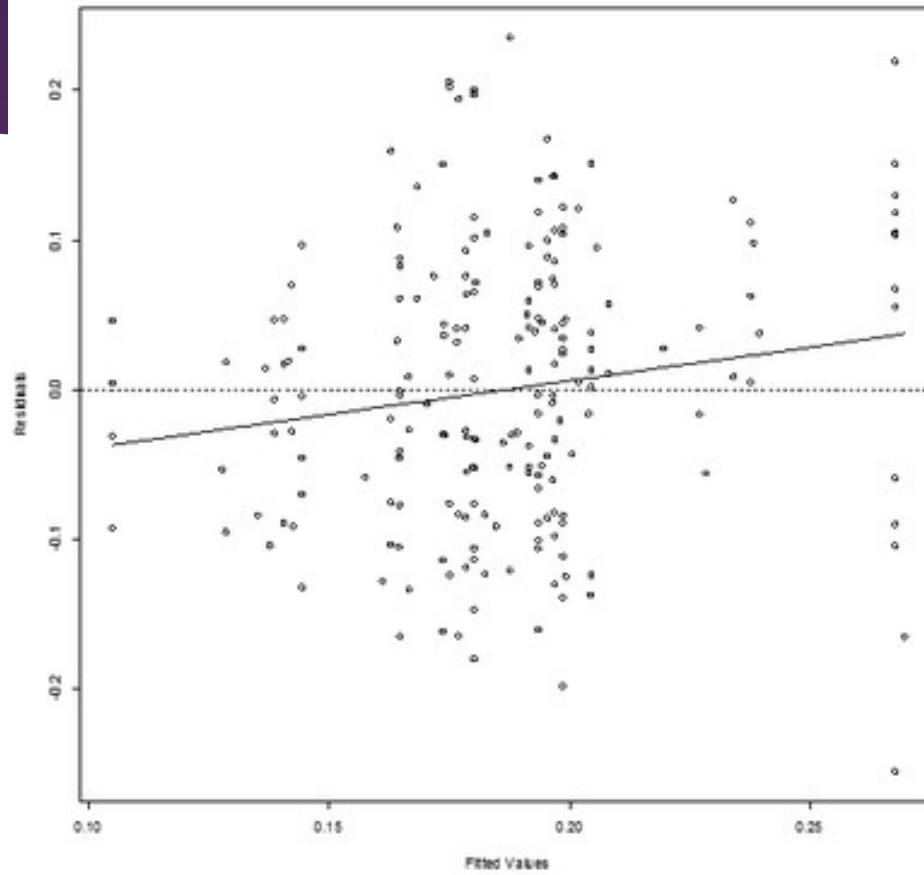
# Heteroscedasticity

- ▶ **Heteroscedasticity** is shown when the error terms (residuals) are different across the different values of the independent variable (IV).
- ▶ **Heteroscedasticity** may also be assessed by looking at residuals across different values of the predicted variable, when there are multiple IVs (see slides 5 – 7).









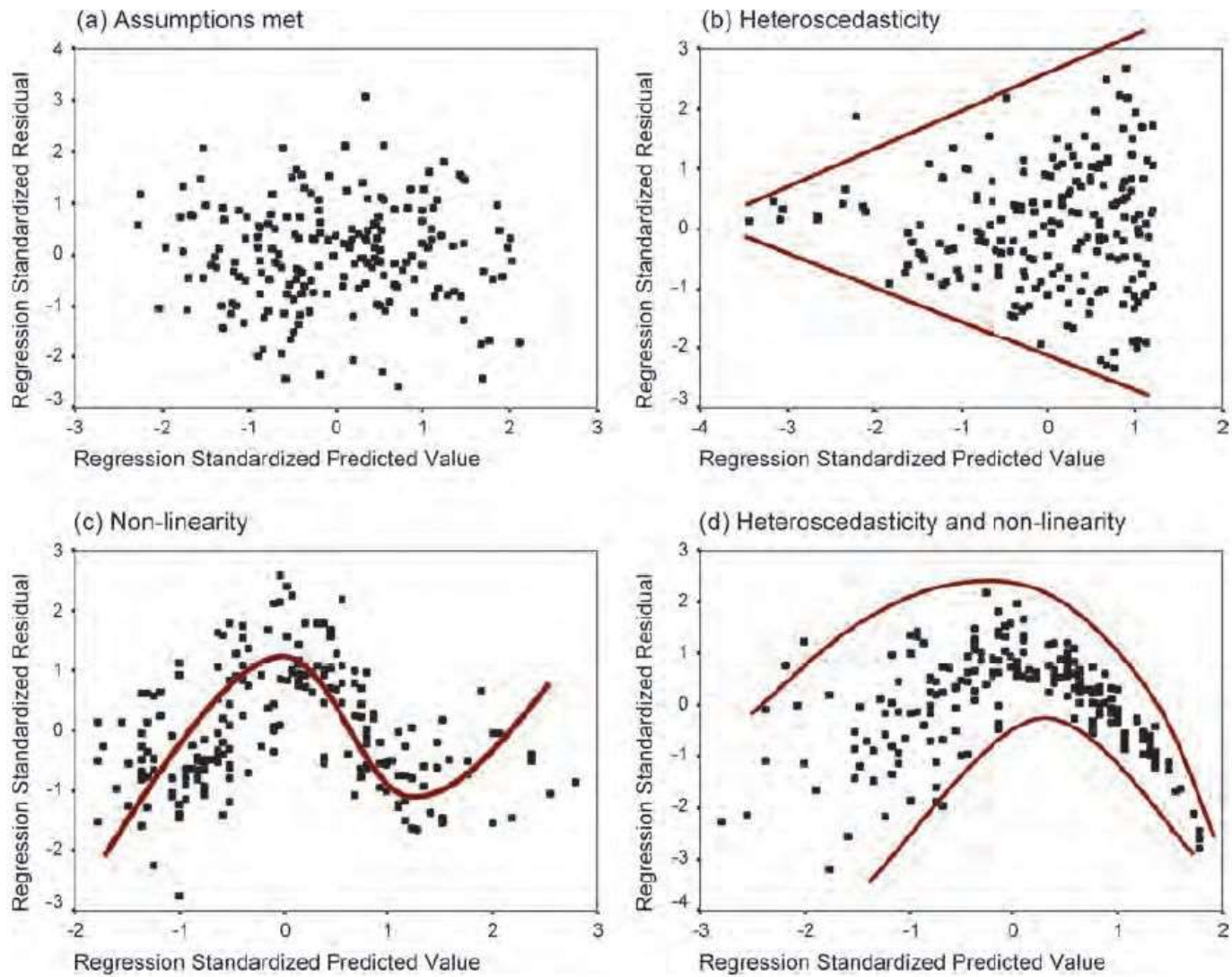


FIGURE 7.19 Plots of \*ZRESID against \*ZPRED

end