

**MKT 791--Research II
Spring 1996
R. Kleine**

SESSION 13

**Analysis of Variance, Analysis of Covariance,
Interaction Effects**

READINGS

- LaTour, Stephen A. and Paul W. Miniard (1983), "The Misuse of Repeated Measures Analysis in Marketing Research," *Journal of Marketing Research*, 20 (February), 45-57.
- Pedhazur, Elazar J. (1982), *Multiple Regression in Behavioral Research: Prediction and Explanation*, New York: Holt, Rinehart, Winston, "Analysis of Covariance," pp. 493-526.
- Rosnow, Ralph L. and Robert Rosenthal (1989), "Definition and Interpretation of Interaction Effects," *Psychological Bulletin*, 105 (1), 143-146.
- Meyer, Donald L. (1991), "Misinterpretation of Interaction Effects: A Reply to Rosnow and Rosenthal," *Psychological Bulletin*, 110 (3), 571-573.
- Rosnow, Ralph L. and Robert Rosenthal (1991), "If You're Looking at the Cell Means, You're Not Looking at *Only* the Interaction (Unless All Main Effects Are Zero)," *Psychological Bulletin*, 110 (3), 574-576.
- Ross, Jr. William T. and Elizabeth H. Creyer (1993), "Interpreting Interactions: Raw Means or Residual Means?" *The Journal of Consumer Research*, 20 (September), 330-338.
- McClelland, Gary H. and Charles M. Judd (1993), "Statistical Difficulties of Detecting Interactions and Moderator Effects," *Psychological Bulletin*, 114 (2), 376-390.

HIGHLY RECOMMENDED

- Green, Paul E. (1973), "On the Analysis of Interactions in Marketing Research Data," *Journal of Marketing Research*, 10 (November), 410-420.
- Stevens, James (1992), *Applied Multivariate Analysis*, Chapter 8: Factorial Analysis of Variance.
- Stevens, James (1992), *Applied Multivariate Analysis*, Chapter 9: Analysis of Covariance.
- Wilcox, Rand R. (1987), "New Designs in the Analysis of Variance," in *Annual Review of Psychology*, Vol 38, 29-60.

YOUR TURN

Perform an analysis of variance using PROC GLM. Specify in your model both main and interaction effects. Interpret your results. Bring the analysis to class. (You might find the MEANS option useful as it provides cell means; also request LSMEANS.)

Perform an analysis of covariance. Interpret your results. Bring the analysis to class.