# East Carolina University

**Department of Psychology**

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## Multiple Regression Assignment: Predicting Productivity in the Workplace©

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Below you can link to data I have simulated for you for this exercise in multiple regression analysis. Each line has data for one subject. Subjects are electronics technicians employed at a firm that manufactures a variety of electronic devices. The first variable in the data set is Productivity, a measure of the employee's productivity relative to other workers' in similar positions. Next is Morale (a global measure of enthusiasm for the job), then Fairness (have you been fairly treated by the firm?), then Jobskill (objective measure of employees' relevant job-skills), then Payannual (salary), and finally Timeout (how many hours has the worker missed due to anything other than scheduled vacation time).

Conduct a complete regression analysis to predict productivity from the remaining variables. Write an APA-style summary/interpretation of your results.

- Include in that document a table like the first table in the document Presenting the Results of a Multiple Regression Analysis.
- Refer to that table and describe the main findings (such as which predictors had significant zero-order correlations with the outcome variable and which had significant partial effects in the multiple regression.
- Don't forget to report the *F* statistics for testing the $R^2$ and a 90% confidence interval for the $R^2$.
- Do obtain variance inflation factor statistics and report the value of the highest one, along with a statement regarding whether or not multicollinearity was a problem.
- Obtain a residuals plot (predicted values versus residuals) and comment on whether or not there is any problem with the normality or homoscedasticity assumptions. If you use SAS Proc Reg, the necessary plots will be included in the default HTM output.

Name your Word document file "yourLASTname_Productivity" -- no first names, please.

This assignment is due at **TBA**. Email it to Professor Karl with a subject line of "PSYC 7433: Productivity Assignment."

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## Links to the Data Files

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|---|---|---|---|
| Al-Hammori, Deanna | Bond, Dillon | Capiaghi, Alex | Conder, Lauren |
| Crespo, Julian | Demott, Bea | Donelan, Jennifer | Dos Santos, Anne |

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|---|---|---|---|
| Eddy, Will | Haley, Erin | Mcadams, Ellie | Mcintyre, Joel |
| Meier, Brittany | Nguyen, Vanessa | Owens, Brittnie | Rajaei, Afarin |
| Sall, Kayla | Skinner, Lonnisa | Smith, Chris | Welch, Melissa |
| Williams, Juinell | Wynn, Taylor | Best News Reporter Ever ! | |

Contact Information for the Webmaster,
Dr. Karl L. Wuensch

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