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PTC 604: Communication Theory and Research

Assignment 12 –File 3

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What is the model, and what is its strength as measured by the R Square? What are the potential weaknesses of this one-time analysis of the model, and how may the model be further tested for its validity?

The model is that the scores of eight core competencies (independent variables) accurately predict a graduate student's performance in NJIT's Professional and Technical Communication program (dependent variable). The regression analysis in Assignment12_File2_BMorgan.spv show an r^2 value of .924, $df(7, 59)$, $F=102.098$ and $p<.01$, which easily exceeds the required .05 confidence interval. As a result, %92 of the variability of the overall portfolio score represents the proportion of the variation in the dependent variable (overall portfolio score) that is explained by the independent variables (eight core competencies).

A potential weakness of the analysis is that a high r^2 value for this particular data set may not translate to data sets collected from other semesters. The data set is complete and reliable enough to draw conclusions for the semester under study, but researchers may not be able to draw conclusions about scores in other semesters. The model may be further tested for its validity by running a regression analysis on a set of data from multiple

semesters. If the r^2 value is repeatedly high, the model's integrity is intact. If scores are significantly lower, the model will need to be re-examined.