ECONOMICS AND QUANTITATIVE ANALYSIS -- LINEAR REGRESSION REPORT

DUE DATE: 3 February 2020

WORD LIMIT: 1200 words

 WEIGHTING: 40%

Instructions As an economist working in the OECD you have been asked to prepare a short report that examines the statistical association between average life satisfaction and GDP per capita using the data contained in the spreadsheet (linear regression assignment data).

Your report needs to be structured as follow:

1. Purpose (2 marks) In this section, the purpose of the report needs to be clearly and concisely stated.

2. Background (4 marks) In this section, a brief literature review on the association between life satisfaction and GDP is required. Why are economists interested in this particular issue?

3. Method (4 marks) In this section, the data source and empirical approach used to examine the relationship between life satisfaction and GDP needs to be detailed.

4. Results (20 marks) In this section, you need to present and summarize the results from your statistical analysis. In particular, the results section must:

 Provide a descriptive analysis of the two variables (e.g., mean, standard deviation, minimum and maximum). Which countries have the lowest and average life satisfaction scores? Which countries have the lowest and highest GDPs per capita? (2 marks).

 Develop a scatter diagram with GDP per capita as the independent variable. What does the scatter diagram indicate about the relationship between the two variables? (3 marks).

 Develop and estimate a regression equation that can be used to predict average life satisfaction given GDP per capita. (2 marks).

 State the estimated regression equation and interpret the meaning of the slope coefficient (to make the interpretation easier multiply the estimated coefficient by 10,000). (3 marks).

 Is there a statistically significant association between GDP per capita and average life satisfaction? What is your conclusion? (2 marks).

 Did the regression equation provide a good fit? Explain. (3 marks).

 Luxembourg, Ireland, and Norway appear to be outliers in terms of GDP per capita. Re- estimate your regression model without Luxembourg, Ireland, and Norway. How does this affect the slope coefficient and goodness of fit? Explain. (5 marks).

5. Discussion (5 marks) In this section, provide a brief overview of the results. What are the key strengths and limitations of this analysis? (e.g., data, method, etc.). How do the results from this analysis compare with other studies? (e.g., are the findings consistent?). Do these findings have clear policy implications?

6. Recommendations (5 marks). In this section, you should present three to five well-considered recommendations