

## ETW2001 Assignment 2 Instruction



- This is an individual report writing (25% of total mark).
- The topic is relevant to Sustainable Development Goal (SDG) 3.
- No word limit, but the report is limited to 10 pages, **excluding** the reference list and Appendix.
- Font size 12, spacing 1.15, font: Times New Roman, and default margin.
- This assessment covers Learning Objectives 1,2 and 3 of the unit.

### Context of the report

Regardless of economic development level, people around the world would want to maximize their happiness level in their given circumstances. In the field of positive psychology, the concept of 'life satisfaction' is popularly used as a simple measure to represent the 'happiness' of an individual or for a country.

After experiencing several economic crises, some prominent economists start to doubt the conventional measurement of economic development<sup>1</sup>. They proposed an idea to include a concept of life satisfaction to represent the quality of living.

Your main task is to analyze what macro-economic variables crucially influence people's life satisfaction around the world. Not only to explore relationships between the given variables but also to estimate how each variable influences the outcome variable.

Measure of life satisfaction is obtained from World Happiness Report (WRH) and the other variables are extracted from World Development Index (WDI) for 2018. In the dataset, several macroeconomic variables are provided across the countries.

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<sup>1</sup> For instance, Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009). Report by the commission on the measurement of economic performance and social progress, has emphasized the importance of additional economic measurement after 2008 Global Financial Crisis.

## Your Task

### A. Introduction (2 pages)

You are required to do a little research and write an introduction. You are expected to:

- i. Why is life satisfaction essential, and how can its measure be used for the governance of the country?
- ii. Identify crucial factors to secure the life satisfaction of people around the world.
- iii. What is the objective of the report?

You must perform some research on how life satisfaction measure is used from a macro-economic perspective. There is no minimum number of references, and try to avoid citing newspapers or news. Utilize a journal database to enrich the quality of your report.

If you are unsure where to start, perhaps you can read "Oswald, A. J. (1997). Happiness and economic performance. The economic journal, 107(445), 1815-1831" to start your research. It would be better to extend your research from more recently published articles.

### B. Descriptive analytics (3 pages)

Perform a descriptive analysis with given variables. You are expected to:

- i. Analyze the variable that you are trying to 'predict'
- ii. Perform appropriate analysis on explanatory variables. Provide a brief explanation of your analysis.

This includes univariate or multivariate analysis using appropriate visualization. You may use a contingency table or various charts to elaborate on the nature of the variables. (3 pages)

### C. Predictive analytics (3 pages)

Perform a predictive analysis with given variables. You are expected to:

- i. Develop a regression model to explore the important factors determining the life satisfaction of people around the world.
- ii. Evaluate the robustness of your model. This includes evaluation of the goodness of fit, VIF, and residual test of the model.
- iii. Perform hypothesis tests of independent variables of the model.
- iv. Interpret the estimated coefficient of 'significant' independent variables.

You only need to report ONE regression model. The selection criteria of the model should be discussed in the Appendix<sup>2</sup>. Inclusion or exclusion of independent variables should be justified at least briefly.

### D. Limitation (1 page)

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<sup>2</sup> Selection criteria is to describe how you come up with the final model.

Briefly discuss the limitation of the model you developed<sup>3</sup>.

E. Implication and recommendation (1 page)

Based on Part B and C, what is the implication of the analysis? Discuss your findings and recommend a policy to improve the life satisfaction of people around the world.

Do not get obsessed with the page number. The given page number is the approximate amount of writing.

There is no fixed answer for this assignment. The markers will focus on the depth of analysis and the flow of the report supported by rigorous statistical analysis.

Students would wonder what to put in the Appendix. You do not need to copy the entire R code into the Appendix. Your main report should include all the essential information that readers must know, and the rest of the less-essential information should be included in the Appendix.

**Submission (Due 17 Oct 11:59 PM in MYT via Moodle)**

You are required to submit two files:

1. Your report including reference list and Appendix. Convert your report into PDF format.
2. R-script of your analysis. Save your R-script frequently.
3. Please save the above two files as "student ID\_Name". eg) 21323682\_ChunMinSoo
4. If you need an extension due to an unforeseen incident, please do contact [chun.minsoo@moansh.edu](mailto:chun.minsoo@moansh.edu) immediately. The extension will not be granted for 'heavy workload'. You must provide a piece of evidence to request an extension. If you can only submit after the deadline, please do apply for special consideration via <https://sors.monash.edu.my/>

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<sup>3</sup> Lack of data is not considered as weakness of the model. Discuss limitation of the 'model', not the data.