ARTISAN EMPORIUM – QUESTIONS – Spring, 2024

Suppose you are consultants helping Barry Levin. You have just confirmed that, for all practical purposes, Ms. Kim will be unable to work at all during the next twelve (12) years, including *all* of 2016. Do an analysis which covers the questions below.

Q. 1.   From the case text, provide no less than five (5) and no more than seven (7) possible questions for a movie-going customer survey.

Q. 2.   The data from Ms. Kim is in the Excel file on the course website. a) Use Excel, along with this file, to determine Ms. Kim's *real* income for the last fifteen (15) years. You'll need to obtain the CPI ("Annual Average") for the past fifteen years from:

https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator/consumer-price-index-1913-

Adjust each price index by dividing by 100. Then, divide gross income by your new, adjusted (converted) price index to calculate her past *real* income for each year.

b) Using Excel, find the mean, median, standard deviation, and variance of her past *real* income. Explain the meaning of these descriptive statistics. What number should your team use to begin to forecast future earnings? Take into account both statistical and non-statistical considerations.

Q. 3.   How do economists construct price indices? How do you interpret them in the context of Ms. Kim's gross income? Use Excel regression to analyze the relationship between the adjusted price index (dependent variable) and year (independent variable). Interpret your regression findings by discussing the coefficient of determination (R-square), the regression coefficient, the regression equation, and the p value.   Is the regression equation a good predictor of price indices? Why is 2009 very different? Take into account statistical, macroeconomic, and other considerations.

Q. 4.   What would be the likely amount of an award to Ms. Kim? Assume that Ms. Kim's real income will not change over the next twelve (12) years. Use the regression equation from question 2 to project the adjusted price index for the next twelve years. Compute the projected gross income by multiplying the real income by the projected adjusted price index. Assume that Ms. Kim pays 28.5% of her gross income in taxes and that Green will not provide state assistance. Finally, assume that the discount (present value) rate is 5.50%. Discuss the factors that could cause Ms. Kim's future income to differ from your estimate.