ECON 2456 Gini Practice Questions

Robert Szarka

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1. Consider the economy of Freedonia, whose five residents—Harpo, Chico, Zeppo, Groucho, and Margaret—live in five separate households. In 2008, we measured their incomes as $0, $0, $10, $20, and $70, respectively. In 2009, we measured their incomes as $0, $5, $5, $15, and $75, respectively.

   (a) Calculate the quintile shares for income in Freedonia in 2008 and 2009.
   (b) Draw the Lorenz curves for Freedonia in 2008 and 2009.
   (c) Based on the relative position of the curves alone, which year had more income inequality?
   (d) Calculate the Gini coefficient in 2008 and 2009. Based on the Gini coefficient, which year had more income inequality?

2. Each line lists the incomes for the households in a sample economy. Calculate the Gini coefficients.

   (a) $1, $1, $2, $3, $5, $8, $13, $21, $34, $55
   (b) $2, $5, $13, $34, $89
   (c) $5, $13, $34, $89
   (d) $59,257, $65,316, $16,741, $45,492, $30,530

Answers to problem #2 on following page.

Answers:

1. Provided in class.

2. (a) 0.5909091

   (b) 0.5678322

   (c) 0.4840426

   (d) 0.2316726

   Notice the relationship between the first three examples: (b) is an aggregated version of (a), while (c) is a version where households with low incomes aren't observed.