KANSAS STATE UNIVERSITY

Economic Analysis For Business
(Economics 815)

Professor D. Weisman
Spring 2011

Take-Home Essay Question 1

Instructions: This is the first take-home essay question in this class and it is worth 50 points. The essay must be typed, either double-spaced or one and one-half spaced, and use a font size no smaller than 12 pt. While there is no definitive page constraint, you are encouraged to practice economy of presentation. You need not type any graphical analysis used in support of your answer, but such graphs should be constructed with precision. Your name and student number should appear in the upper right-hand corner of your essay. You are encouraged to work with your classmates in developing the ideas necessary to answer this question, but the write-up itself should be your own work. These instructions should be followed precisely.

The City Council in Manhattan is giving consideration to implementing a price ceiling on rental units based on the number of bedrooms in the unit. The demand function for rental units (on a single bedroom equivalent basis) is given by $Q^D = 80 - 3P + 2q$ and the supply function is given by $Q^S = 2P - q$, where P is price, Q is quantity and $q > 0$ is an index of housing quality. The Council is giving consideration to imposing a ceiling price for rental units of $P^{max} = 16$.

a) Let $q = 20$ both before and after the imposition of the ceiling price. Are consumers of rental housing in Manhattan well served by this policy? Provide a careful economic analysis in support of your claim. (15)

b) Continue to assume that $q = 20$ prior to the imposition of the ceiling price. What can you infer about the level of housing quality if consumers are worse off following the imposition of the ceiling price? Provide a careful economic analysis in support of your claim. (15)

c) In addition to the price ceiling of $P^{max} = 16$, suppose that the Council also imposes a quality standard on rental units. What value of q would the Council impose if its policy objective is to maximize consumers' surplus at the ceiling price? What is the corresponding maximized value of consumers' surplus? (10)

d) Suppose now that supply is perfectly elastic at the market equilibrium and $q = 20$. How much better/worse off are consumers with the imposition of the ceiling price on rental units of $P^{max} = 16$? Provide the economic rationale for your answer. (10)