

1. Raw cashew nuts are a product of Mozambique where more than one million rural households have an occupation related to the industry. Suppose that the entire industry consists of 200,000 farms that act as perfect competitors and can sell only domestically. Suppose also that each farm has two factors of production, labor and trees, and that trees are fixed in the short run. Each farm's minimum average cost occurs at an output of 500 kilograms of nuts. Assume also that each farm's technology is consistent with the law of diminishing returns.
 - (a) In January 1995, the market price for cashew nuts is 600 meticaïs per kilogram. Using appropriate diagrams carefully draw this equilibrium for the industry and a typical farm, incorporating as much details as the problem description allows. (7 points)
 - (b) It seems reasonable to assume that a farmer will make the most profit if he/she produces at the output at which average cost is minimized. Is this statement true or false? Explain. (6 points)
 - (c) Suppose you were told that the price of raw cashews had been stable at 600 meticaïs per kilogram for many years. Would this cause you to change your answer in part 1b? Explain concisely. (6 points)
 - (d) Now suppose that in 1996 Mozambique removes all trade barriers with India, whose consumers love raw cashew nuts. Using appropriate diagrams, carefully show: one, what happens to the demand curve and the equilibrium price for Mozambique's raw cashew nuts, and two, how a representative producer will react to such a price change, explaining concisely what you expect to happen in the long run. (6 points)

2. Now assume that Mozambique has only one (competitive) processing industry, and a developed labor market. Industries are located in cities, and you can assume that a cashew farmer cannot work in the processing industry and vice-versa.
 - (a) Draw a graph showing how each individual (urban) worker allocates his/her time between consumption and leisure. Label curves and axis carefully. Explain, as concisely as you can. (7 points)
 - (b) What does the supply curve for labor look like in general? Draw a graph and explain briefly. (6 points)
 - (c) Now draw a demand curve for labor and show graphically how the equilibrium wage is determined. (6 points)
 - (d) Now suppose that I tell you that the processing industry uses raw cashew nuts as an input for production, taking the price of this factor as given. In 1996, the rapid increase of this price drove many firms out of business. What do you think happened to urban unemployment and the equilibrium wage (hint: think about what happened to the *demand* for labor)? (6 points)