31E99906 Capstone Microeconomic PolicyInstructor: Matti LiskiTA: William OgdenReturn method: through mycourses by the deadline

Problem Set 3: Question 3

In lecture 10 our guest introduced horizontal and vertical mergers. In this problem we focus on horizontal mergers, and study the Williamson trade-off that was discussed in lecture 10 (you can also read it *(here)*)

In Figure below AC_0 is the average cost for two firms before merging, and AC_1 is this cost after the merger. Assume that there is enough competition before the merger so that the price equals costs, $P_0 = AC_0$. After the merger, there is upward price pressure so the that the new price is $P_1 > P_0$.



- 1. Recall the Williamson trade-off: Identify from the Figure when the society is indifferent between accepting or rejecting the merger?
- 2. Assume now that demand has constant elasticity, η . If the price increases by x% because of the merger, what should be the percentage cost reduction to offset the price increase? For numbers in the Table below, please obtain the cost-reduction needed to offset the deadweight loss from a price increase.

 Table 1: How many percent cost must decline to offset the percentage price

 increase?

x%	$\eta = 3$	$\eta = 2$	$\eta = 1$
5	-	-	-
10	-	-	-
20	-	-	-