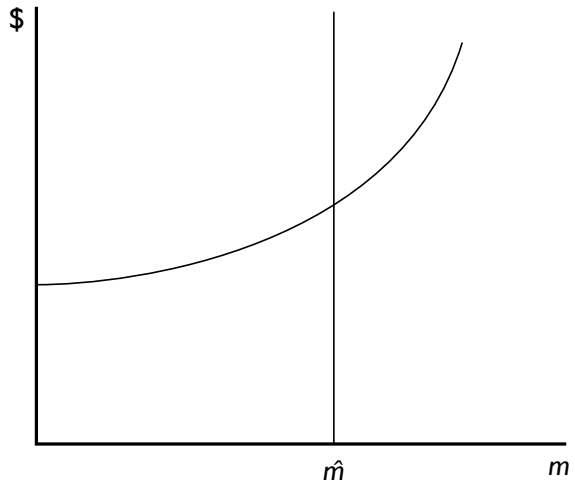
ECON 224, Prof. Hogendorn, Spring 2008

First Quiz

1. *NWDelta.* Northwest Airlines and Delta Air Lines have been cooperating with their frequent flier programs and some scheduling arrangements for a long time. Let m be Delta's marketing efforts that are directed toward Northwest.

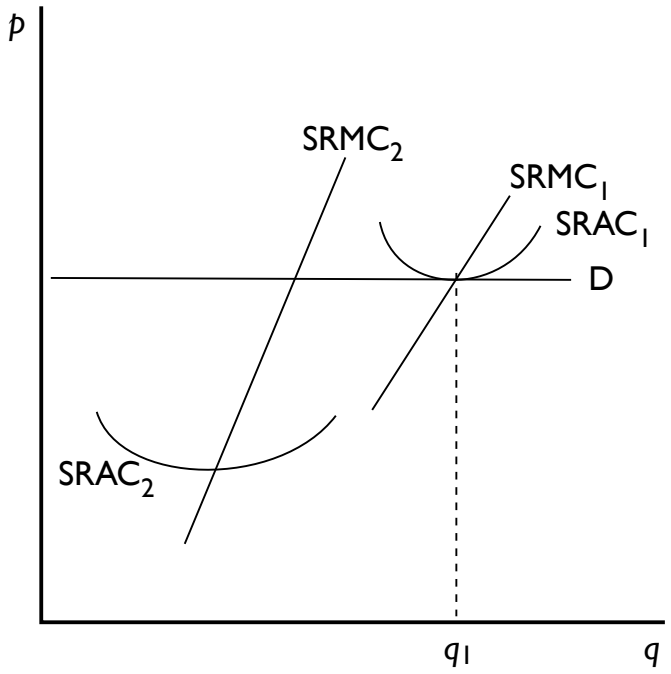


   (a) Northwest has determined that $\hat{m}$ is the optimal level to ask for from Delta. If they can contract on it and verify the result, how much do they have to pay Delta? Explain.

   (b) It turns out that only Delta's marketing *budget* is verifiable, not the *direction* of the effort toward Northwes. If we redefine m as the underlying, unverifiable direction of Delta's marketing effort, what would you expect Delta to do? Why?

   (c) Suppose that Delta's marketing direction is correlated with Northwest's measurable success after the fact. Show how Northwest could offer a higher-powered contract to Delta. Why wouldn't delta do less m than $\hat{m}$ under such a contract?

2. *OilWells.* Suppose a small county in West Texas has 28 oil wells with cost curves subscripted "1" in the graph below and 4 oil wells with cost curves subscripted "2." The price of oil is determined outside this market, and is shown by the horizontal demand curve.



(a) Show in the graph what quantity a type-2 well produces. How much profit does it make?

(b) If the type-2 wells are earning Ricardian rents, what does this imply for the long-run number of each type of well and the price?

(c) If the type-2 wells have recently adopted a new technology which is available to all oil wells worldwide, what does this imply for the long-run number of each type of oil well and the price?