



Lecture Note on Double Marginalization

When firms in subsequent stages of a value chain have market power, the total profits will be lower than what would be jointly optimal for them. The reason is that each firm, in using its market power, will limit its output in order to increase prices and thus profits. In doing so, however, it does not take into account the impact these actions have on the other firms in the value chain. Jointly, these firms will thus exert too much market power for their own good.

To see this in more practical terms, consider a monopolist newspaper company that sells newspapers to newsstands. Each newsstand has a monopoly in its own territory. Assume for simplicity that the marginal costs of producing a newspaper and of selling it are both zero and that there are no fixed costs.

Consider the relationship between the newspaper company and one of the newsstands. The final demand for newspapers for that newsstand is $Q = 100 - P$, with P the price charged by the newsstand and Q the quantity of newspapers sold. Denote by p the price charged by the newspaper company to the newsstand.

From the perspective of the newsstand, the effective marginal cost of selling a newspaper is p , the price charged by the newspaper company. Since its marginal revenue is $100 - 2Q$, the newsstand will sell $Q = 50 - p/2$ newspapers. This is also the demand for the newspaper company when it sets a price p . The inverse demand curve for the newspaper company is then $p = 100 - 2Q$, which gives a marginal revenue of $100 - 4Q$. Since its marginal cost is zero, it will sell 25 newspapers to this newsstand at a price $p = 50$. The newsstand will then charge a price $P = 75$ to end consumers. Total profits for newspaper company and newsstand together are $P * Q = 1875$ (since costs are zero).

If the newspaper company also operated the newsstand, it would simply face a demand curve of $Q = 100 - P$. Its marginal revenue would thus be $100 - 2Q$. Setting this equal to its marginal cost of zero, the company should sell $Q = 50$ at a price $P = 50$, for a total profit of 2500. Note that the profit of this merged operation is substantially higher than the joint profit of the independently operating newspaper company and newsstand.

This shows how the independent exercise of market power in two stages of the value chain reduces total profits. This phenomenon, known as 'double marginalization', has important implication for firm boundaries and retail contracts. Note, for example, that both firms could be made better off if the newspaper company charged the newsstand a concession in exchange for providing the newspapers at marginal cost. (With a concession of 1850, the profit of the newsstand increases by 25 and of the newspaper company by 600).