

Topic 8: Vertical integration

Consider an upstream market and a downstream market. Firms in the upstream market produce an input used by firms in the downstream market to produce a final product. If there is only one firm U_1 in the upstream market and one firm D_1 in the downstream market, we can model the situation as a two-stage game in which U_1 chooses the price of the input first, then D_1 buys inputs, produces and sells outputs. The price of the input affects the marginal cost of D_1 as well as the equilibrium price of the output. Given U_1 is a monopolist, the price of the input is high and the price of the final output reflects double monopoly pricing. By integrating vertically, the final product is produced at a lower cost: the equilibrium price in the downstream market is lower, total quantity of output is higher and consumers' surplus increases. Total profit also increases (production is more 'cheaper' and more efficient). Overall, vertical integration increases welfare.

When the market structure is more complex, the effect of vertical integration can be positive or negative. For instance, if upstream firms compete in price, there is no gain in efficiency and vertical integration results in less competition in the upstream market. From a general perspective, vertical integration has two possible effects: (i) lower the marginal cost of production of the final output (positive effect) and reducing competition on at least one of the markets (negative effect).