Pass-Through, Quality Adjustment, and Imperfect Competition

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How does a change in marginal costs affect the final consumer price in imperfectly competitive markets, where price-setting firms can also adjust product quality? In this paper, we study cost pass-through in such an environment. For both symmetric and heterogeneous firms, we show that pass-through for price and quality can be derived in terms of sufficient statistics that do not depend on any particular demand specification—namely, the first- and second-order elasticities of market demand, the Lerner index of market power, and equilibrium prices and quality choices. In addition, we obtain explicit pass-through formulas under firm symmetry. We then argue that under multinomial and random-coefficient logit demand systems, firms may respond to an increase in operational marginal costs by both lowering prices and reducing product quality only if the number of symmetric firms is less than or equal to three. Overall, our numerical analysis suggests that the random-coefficient logit model is more flexible than the multinomial logit model in that it allows price pass-through to exceed one, which is not possible under the multinomial logit. In addition, quality pass-through can be positive under random-coefficient logit demand.