

Transaction Costs in the Trading of Variable Quality Commodities

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Abstract

We study the organization of markets when goods are heterogeneous and contracting is not viable. Buyers presented with a batch of non-uniform goods sold at the same price gather information in two ways: by *scanning* the overall quality and variability of the whole batch, and by *inspecting* individual units in order to get the best ones (i.e. cherry-picking). Both scanning and inspection represent a cost to the buyer which does not result in a transfer to the seller, thus reducing the gains from the transaction. We develop a model for this situation and obtain several theoretical results which are then contrasted with common practices in retail trade. We prove that 1. If buyers are allowed to inspect, the good must be sold at a price above average value. 2. As a result, the quality distribution will decay over time, and the seller will be forced to lower the price. 3. The problem is more acute when there is greater dispersion in quality. 4. The seller is motivated to make individual inspection costly, but he must keep the cost of scanning the whole batch low. 5. There are large gains to be made by increasing uniformity. 6. When buyers differ from each other, the ones with lower cost of inspecting could drive away the ones with higher inspection cost. When this problem is serious enough, the market for the commodity may not exist. The results in this paper help explain a wide variety of observed phenomena in various markets. Oranges are often displayed in a pyramid to make scanning cheap but individual inspection costly, thus inducing random picking. We also explain why pre-selected (pre-packaged) fruit is cheaper, why supermarkets with a heterogeneous customer base tend to sell either very uniform produce or pre-bagged produce, why there is a "second hand" vegetable market, and why producers are willing to incur very large costs to achieve uniform goods.