Title: Guaranteed Trade-in Prices: A Triple Bottom Line Perspective

Abstract: This paper aims to analyze a trade-in price guarantee program from perspectives of firms, consumers and the environment. Specifically, we consider a two-period model consisting a value chain with a firm manufacturing and selling a durable product and another firm offering a trade-in price guarantee to consumers. Through this model, we study how such a guarantee affects the firms’ performance and the surplus enjoyed by consumers. What is its environmental footprint in terms of its effect on demand for new products that use new materials and energy to produce? We find that while trade-in price guarantee increases the valuations of some consumers, overall they become worse off due to the upward push of the resale value insurance on retail prices. Also, even though trade-in guarantees dampens the manufacturer’s sales for both periods, the manufacturer likes this service innovation as it increases her profits. Lower product demand has a positive consequence in the form of a lower environmental footprint. We also address how these perspectives are impacted by whether the guarantee is provided directly by the firm itself or a third party. Interestingly, a change in the identity of the guarantor, i.e., when the firm selling the products is providing the guarantee not a third party, reverses the negative (resp., positive) impact of guaranteed trade-ins on the consumers (resp., environment).

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