Small Price Changes and Sales Volume: A New Test of the Menu Costs Theory

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Menu cost models play a central role in modern macroeconomic and monetary economy theorizing. One of the key predictions of menu cost theory is that firms will avoid making "small" price changes because infrequent large price changes are more efficient in reducing menu costs. Nevertheless, several studies have reported that small price changes account for 20% to 40% of all price changes (Carlton, 1986; Kashyap, 1995; Lach and Tsiddon, 1996; Dhyne et al., 2006; Chen et al., 2008; Chakraborty et al., 2015). To resolve this puzzle, several studies offer explanations that rely on stochastic menu cost or on economies of scope in price-setting of a multi-product firm. In this study, we suggest to consider not yet explored prediction of the menu cost model - an inverse relationship between the level of output and the width of the (S, s) thresholds where the price is fixed inside a band (Barro, 1972). Accordingly, the higher is the output of a monopolist, the narrower the (S, s) band will be. That, in return, implies that a larger proportion of the price changes the firm makes will be small. Analyzing Dominick's scanner price dataset - a large US retail supermarket chain, we find empirical evidence consistent with the above prediction: we show that small price changes are indeed more likely to occur for products with higher sales volume.