WELFARE AND PRICING OF MAIL IN A COMMUNICATIONS MARKET

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Analysis of Optimal Postal Prices in a Modern Communications Market

> Strategy: Begin with familiar postal framework

THREE MARKETS

Single piece (X)

Two types of bulk mail

Transactions mail (Y) Ad mail (Z) E2E Worksharing Entrant Each with its own Demand Characteristics: Independence of X, Y and ZEntrant – imperfect substitute for E2E (comp fringe pricing behavior) Strategy: Find welfare maximizing prices for each

Then Introduce an Alternative Advertising Medium costs (competitive fringe) and demand (imperfect substitute for Z_I) And find welfare effects

Discussion: Provides more general framework Results (solutions to problems) Suggested Extensions Problem 1: USP Monopoly in all Markets (X, Y, Z) Max W s.t. $\Pi_I = 0$ $p^Y(c,d,\epsilon^Y)$ $p_Z(c,d,\epsilon^Z)$

Even with same cost, $p^{Y} \neq p^{Z}$

Difficulty in identifying Y and Z mail in some cases

Problem 2: USP Monopoly in all Markets (X, Y, Z) w/Uniform price imposed between Y and Z Surplus falls relative to the solution to problem 1.

Problem 3: Introduce Alternate Medium Max W A^{Z} is an Imperfect Substitute $Z_{I} = f(P_{I}^{Z}, P_{A}^{Z})$

Under calibration assumptions, surplus is increased

Problem 4: Competition in Both Bulk Mail Markets Surplus again increased – impact of choice

Sensitivities

(1)Importance of relative elasticities
(2) % of Z market enjoyed by alt. medium
(at a given price difference between P_I^Z and P_A^Z)
As % increases, Z rises, as does Surplus

More difficult for USP to break even (accomplished via an increased price of X and Y).

Extension Possiblities (1) Competitive Fringe Pricing Behavior (2) Hybrid Mail (USB has revenue stake in alt. med) – two types

Type A - Entrant collects, USP delivers Profit function now includes the revenue term: $(a^{ZA} - d_I)Z_A(P_I^{Z}, P_E^{Z}, P_A^{Z}, P_A^{ZA})$ Where P_A^{ZA} is the hybrid mail price, and a^{ZA} is the access price for such mail. Hybrid Mail Type B USP collects, entrant distributes ad mail electronically

Now profit function includes: $(P_I^{ZB} - C_I - b^{ZB})Z_B(...),$ where P^{ZB} is the price for this type of 'mail' And b^{ZB} is paid to the entrant to 'deliver'. NB: It is possible that $b^{ZB} < 0$.