oligopoly may involve a vertical market structure, in which downstream public

composed of one public firm (denoted as 0) and one private firm (denoted as 1). We allow for the possibility that this downstream private firm is owned by domestic and/or foreign investors. We wish to examine how the privatization of the public firm affects consumer benefits and social welfare in the domestic country with or without foreign ownership.

We assume that the firms in the downstream mixed oligopoly produce a homogeneous good. Let q_0 and q_1 be the quantities of the final good produced by the public and private firms, respectively. Market demand for the final good in the domestic market is $P = P(Q)$, where P represents the good's price, $Q(= q_0 + q_1)$ is its total consumption, $P'(Q) \equiv dP/dQ < 0$ and $P''(Q) \equiv d^2P/dQ^2 = 0$. The last condition implies that the final good demand is taken to be linear. With respect

production decision of the public firm differently. Three cases of interest are as follows:

P

It is instructive to discuss the economic reasons behind proposition 2 by looking

$$r_0 = \frac{(\gamma^2\mu + 3\gamma\mu - 6\gamma - 4\mu - 4)a}{\gamma\mu(\gamma\mu - 2\mu + 6) - 10\gamma + \mu^2 - 6\mu - 6} \text{ and}$$

r

domestic firm is able to produce a positive quantity of the final good (and hence will not be foreclosed) if the public firm as a monopoly starts to be privatized. In addition, it is easy to show that $\pi_1 = q_1^2$ and $dq_1 = d\theta > 0$ for $\theta = 0$. We thus have $d\pi_1 = d\theta > 0$. This indicates that the higher the degree of privatization, the higher the amount of profits made by the rival domestic firm. The reason is that the equilibrium price of the final good increases when the optimal privatization level increases.

$$\frac{dW}{d_s} = \underbrace{P(Q^\wedge)\frac{dQ^\wedge}{d_s}}_{\substack{\text{Output distortion} \\ \text{effect}}} - \underbrace{\quad}\frac{dTR^U}{d_s}$$

$$\frac{@W}{@_{\,}} = a^2(1 - {}_{\,})$$

$(0 < \mu \quad 1)$, *the best policy for the domestic government in an open economy is to have the public firm privatized, but only partially.*

by setting a uniform input price to all the downstream firms. At stage four, the firms engage in Cournot competition in making their output decisions.

We show in appendix A2 the solutions for the four-stage game. It follows that the upstream foreign monopolist sets the profit-maximizing input price as:

$r.p$

vatized firm's monopoly power.[19] From the welfare maximization perspective, complete privatization (which would turn the privatized firm into a monopoly

It is easy to show that r increases with μ

Adding q_0 and q_1 together, we calculate the total amount of the final good produced as:

$$Q = \frac{(a - r)[2\gamma^2 + (1 - \gamma)(1 + \mu)]}{3\gamma^2 + (1 - \gamma)(1 + \mu)}.$$

At the input pricing stage, the upstream foreign monopolist maximizes its total profit by charging an optimal input price, which is:

$$r_f = \frac{a(1 - \gamma)\gamma^2}{8\gamma^2 + 3(1 - \gamma)(1 + \mu)}.$$

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