1 Introduction

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onthis sense this understanding i047 0 Td (sense)Tj /T1_0 1 Tf ( )Tj03.722 0 (nor

2

a

λ(a)

a

hnoh_0 1 Tf ( )Tj /T3_1 1 Tf 2.143 0 5ng)so

d a

$$V(d) = \max_{a,f,d'} (1 - f)s + f(1 - a)\lambda(1 + V(d') - V(d)) + V'(d)\dot{d}$$

a

d [7]

a(d) f(d)

$$W(d) = f(d)\lambda(a(d) + (1 - a(d))(W(d') - W(d)) + W'(d)\dot{d}$$

a

$$\max_{a \in [0,1]} a\lambda + (1 - a)\lambda(W(d') - W(d));$$

a

$$W(d') - W(d) \begin{cases} \geq 1 & a(d) = 0 \\ \leq 1 & a(d) = 1 \\ = 1 & 0 < a(d) < 1 \end{cases}$$

3.2 The Pareto Frontier

V

s

$V(d)$

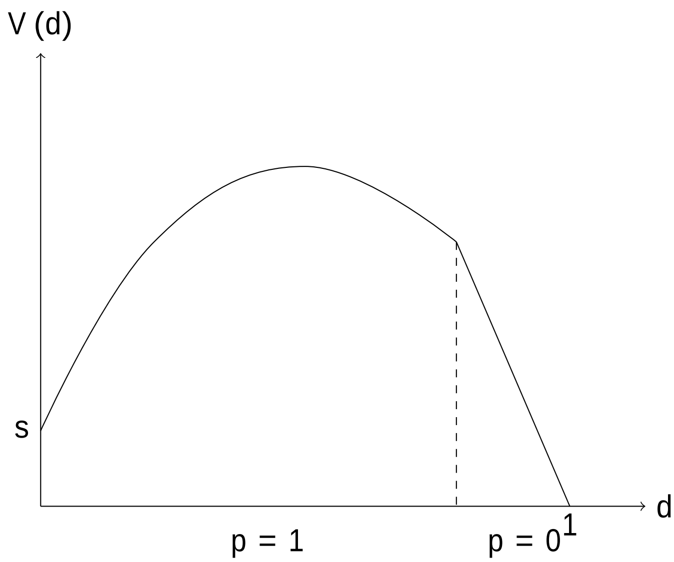
$$\frac{d-x}{d}s + \frac{x}{d}V(d)$$

$s = V(0)$ $d = 0$

s $V(x)$

$$V(x) \geq \frac{d-x}{d}V(0) + \frac{x}{d}V(d)$$

$$a = 0$$



d > $\hat{d}$

$\hat{d}$ 1 d

d = 0

$\hat{d}$

e > 0 T

e; E

$_0(f_T)$

λ d

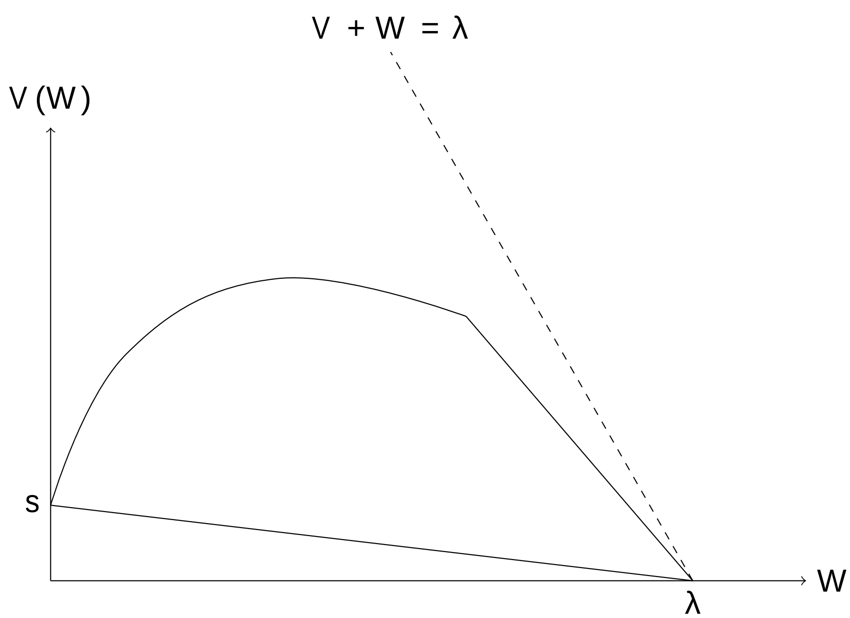
. λ f (d) > 0 d f just

$$W = f\lambda((1-a)+a) + W$$
$$= f\lambda + W$$

$W(d)$ $W = W(d)$

V W d

d



C

$C - \lambda$

a = 0

λ

C

t

units the λ fol

□

4 Di clo ure and Competition Policy

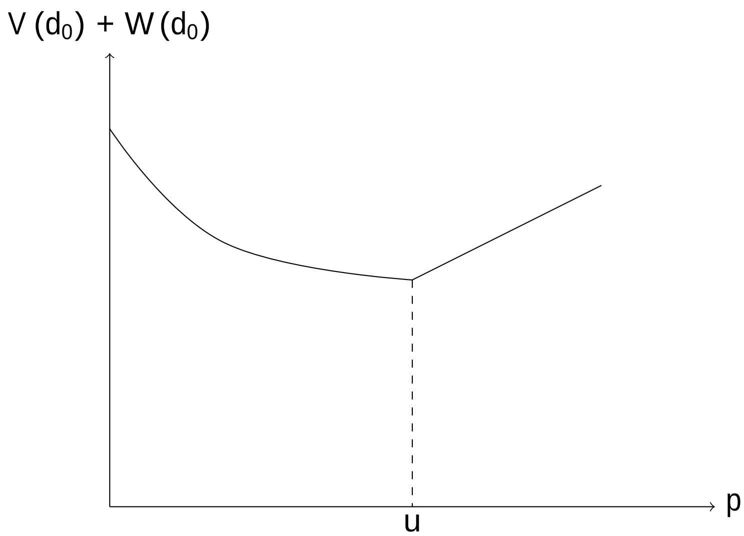
4.1 Disclosure

$\lambda u a_u$ $a_u \leq 1 - a_m$ u

u

13

a



4.1.2 Alternative policies

d̂

d

f [14]

d < d̂; d̂ making

γ γ

γa [15] s

γ

γ s

$\underline{V}(d)$ V γ = 1 s = 0

Lemma 6. $V(d) = \gamma \underline{V}(d) + s(1 - d)$

d

γ s V

s dV=ds

$$V(d) = \max_{a;f} (1 - f)s + f(1 - a)\lambda(\gamma\lambda - s)(d^0 - d) + V^0(d)d$$

$a = 0$ $f = 1$

$$\begin{aligned} dV/ds &= -\lambda(d^0 - d) - d \\ &= -\lambda(d^0 - d) - (d - 1 - \lambda(d^0 - d)) \\ &= 1 - d \end{aligned}$$

$$dV/d\gamma = \lambda^2(d^0 - d) + \underline{V}^0(d)d$$

[15] λ

$dV/d\gamma$ $\underline{V}(d)$

$s = 0$ s $d = 0$

$V(\hat{d})$ $d > \hat{d}$

□

x

γ s $\gamma\lambda d_0 + (1 - d_0)s$ $ds/dx =$

$-\lambda d_0/(1 - d_0)$

d_0

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□

5 Exten ion

.1 Limited commitment for the follower

s

0

V s [16]

d

d = 1

d

Lemma . f = 1

d d < d

f = 1 d

d V (d) ≥ s d < d f = 0

d = d d

$$\frac{d - d}{d} s + \frac{d}{d} V(d) \geq s$$

□

d

(d; 1] V (d) = s

d > d

f = 1 a = 1 d d d d

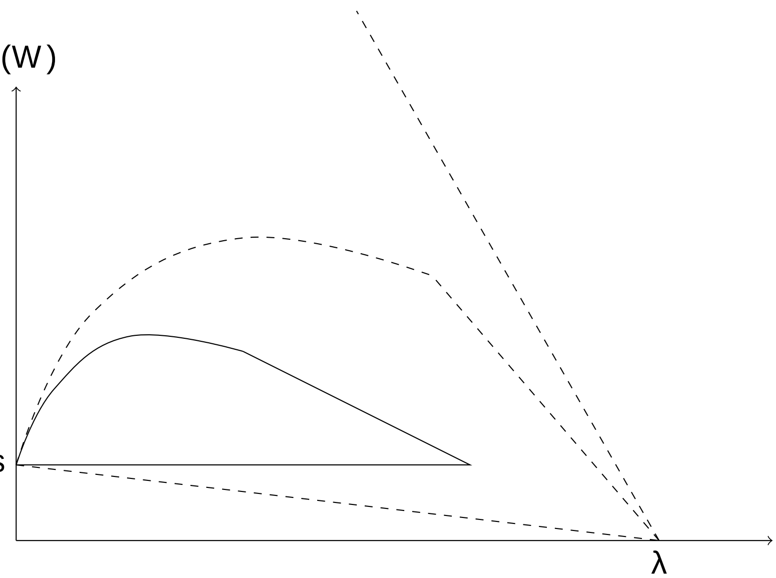
V (d)

d ≤ d

$d > \hat{d}$ $p(d) = 0$ $d < \hat{d}$; $p(d) = 1$ $d = 0$

$a(d) = 1$ $d = 0$

V $V(0) = V(d) = s$ $V^0(d) < 0$



$V(d)$

5.2.1 nown Transaction Value

$\lambda a + v$ $v > 0$

$\tilde{a}$

$$W(d) = f(d)(v + \lambda a(d) + (1 - a(d))p(d)(W(d^0) - W(d))) + W^0(d)d$$

$$W + V = d(\lambda + v - s) + s$$

v

Proposition 9. $dV(d)/dv > 0$ $d \in (0; 1)$

$v^0 > v$ v ,e si1_e siT_e p6-0 1 Tf ( )Tj23T

□

$f = 1$ $a = 1$

$a = 0$ $\tilde{\lambda} = 0$

v

.3 Bad ad ice

s:

a $\alpha + a\lambda_b$

$-b$

$\underline{d}$

$a = 1$

$$\lambda - \lambda(W(d^0) - W(d)) + \lambda_b(W(\underline{d}) - W) \leq 0$$

$$1 - (W(d^0) - W(d)) + \frac{\lambda_b}{\lambda}(W(\underline{d}) - W) \leq 0$$

$W(\underline{d}) < W$

$$V(d) = \max_{a;f;d^0}(1-f)s + f(1-a)\lambda(1+V(d^0)-V(d)) + fa\lambda_b(-b+V(\underline{d})-V(d)) + V^0(d)d$$

V

$a = 0$ $a = 1$

$V(\underline{d}) < V(d)$

a

–

—

j /T3_0 1 Tf 1.944 0 Td33 0 Td (of)aTj /y)28f (Tj /T3_1 1 Tf -28.354 -1.208 Td .)TGames. SamTheoryTj /T3_1 1 Tf -28.354 -1.

roofs

Proof of Proposition 1

V

W

V

$a = 0$ $a = 1$ $a = 1$ $V(d) =$
$V'(d)(d - 1)$

$$V_{a=0}(d) - V_{a=1}(d) = \lambda((\lambda - s) - V'(d))(d' - d)$$
$$= \lambda W'(d)(d' - d) > 0$$

$f(d) = 1$ $a = 0$
W
$\hat{d}$ $a < 1$
$a(d) < 1$ $d0)$ $<$

Proof of Lemma

Step 1: shape of W (and therefore V) for any f and a.

- $a(d) = 1$ $f(d) = 0$ $W(d) = \lambda + W'(d)(d-1)$
  W V

- $f(d) = 0$ $W(d) = W'(d)d$ W V

- $f(d) = 1$ $a(d) = 0$

  $V(d) = \lambda(\lambda - s)(d' - d) + V'(d)(d - 1 - \lambda(d' - d))$

  $d' - d = x$ $x' < 0$ W

$$V' = \lambda(\lambda - s)x' + V''(d - 1 - \lambda x) + V'(1 - \lambda x')$$
$$x'(\lambda V' - \lambda(\lambda - s))/d = V''$$

$$V'' = -x'\lambda(\lambda - s - V')/d$$
$$= -x'\lambda W'/d$$

x' d W' $V'' < 0$

Step 2: kink point where $d' = 1$ 378.267 Tf ( )Tj /T1_1 1 Tf 1.903 0 Td (d)Tj

Proof of Lemma 3

γ

d

$p = 0$ d

$$W_\gamma = \lambda(d\lambda - W_\gamma) - \gamma W_\gamma$$

$d\lambda - W_\gamma = 1$ $W_\gamma = \frac{\lambda}{1+\gamma}$ λ $\gamma(\lambda)$ W_γ

$d\lambda$ λ $\gamma(\lambda)$

$$\frac{d\gamma}{d\lambda} = \frac{1{=}(1+\gamma)}{\lambda{=}(1+\gamma)^2} = \frac{(1+\gamma)}{\lambda} = \frac{1}{W_\gamma}$$

$$\begin{aligned}
V_\gamma &= \lambda(1 + (1-d)s - V_\gamma) + \gamma(s - V_\gamma) \\
&= \frac{\lambda + (1-d)\lambda s + \gamma s}{1 + \lambda + \gamma} \\
&= \frac{\lambda}{1+\lambda+\gamma} + \frac{(\lambda+\gamma)s}{1+\lambda+\gamma} - \frac{d\lambda s}{1+\lambda+\gamma} \\
\lim_{\lambda\,!\,1} V_\gamma &= \frac{1}{1+1{=}W_\gamma} + \frac{(1+1{=}W_\gamma)s}{1+1{=}W_\gamma} \\
&= \frac{W_\gamma}{W_\gamma+1} + s
\end{aligned}$$

$V_\gamma > s$ □