A Appendix

A.1 "H-RA" (Selfish players with differing risk attitudes)

If the candidate is more (less) risk averse than the influencer, influence buying occurs only with conditional (up-front) payment. Whenever influence buying occurs with up-front payment, the payment does not exceed the cost of endorsement, d.

Assume $p' < 1$. Let $(m_{UFP}, m_{CP}) = (x, y)$ and to be able to focus on the distorting effects of the influence buying exchange, suppose that $B_i = B_c = B$. Let $u_j(z),\ j = c, i$ and $z \in \mathbb{R}$ denote the utility of player i. For all possible risk preferences, the minimum accepted UFP by the influencer is $x = d$ (since up-front payment is riskless for the influencer). In contrast, the minimum accepted CP by the influencer, $\underline{y}$, satisfies

$$p' u_i(B + \underline{y} - d) + (1 - p') u_i(B - d) = u_i(B) \tag{2}$$

This equality can be rewritten as

$$\frac{u_i(B) - u_i(B - d)}{u_i(B + \underline{y} - d) - u_i(B)} = \frac{p'}{1 - p'} \tag{3}$$

For the candidate, the payoff difference between buying endorse with UFP over CP is given by

$$\begin{aligned} U_c(x = d; \text{UFP}) - U_c(y = \underline{y}; \text{CP}) = p' \left[u_c(B + W - d) - u_c(B + W - \underline{y}) \right] \\ + (1 - p') \left[u_c(B) - u_c(B - d) \right] \end{aligned} \tag{4}$$

The candidate prefers CP over UFP if this utility difference is less than zero or equivalently if

$$\frac{p'}{1 - p'} \leq \frac{u_c(B) - u_c(B - d)}{u_c(B + W - d) - u_c(B + W - \underline{y})} \tag{5}$$

Without loss of generality, suppose the candidate is more risk averse than the influencer. Then $u_c(x) = \varphi(u_i(x))$ for all x, where $\varphi' > 0$ and $\varphi'' < 0$, i.e. $u_c(.)$ is a concave transformation of $u_i(.)$. Then the candidate, who is more risk averse than the influencer, prefers CP over UFP if

$$\begin{aligned} \frac{u_i(B) - u_i(B - d)}{u_i(B + \underline{y} - d) - u_i(B)} = \frac{p'}{1 - p'} &\leq \frac{u_c(B) - u_c(B - d)}{u_c(B + W - d) - u_c(B + W - \underline{y})} \\ \Rightarrow \frac{u_i(B) - u_i(B - d)}{u_i(B + \underline{y} - d) - u_i(B)} &\leq \frac{\varphi(u_i(B)) - \varphi(u_i(B - d))}{\varphi(u_i(B + W - d)) - \varphi(u_i(B + W - \underline{y}))} \end{aligned} \tag{6}$$

Suppose $u_i(.)$ is a continuously differentiable function. Then if (6) holds, the following inequality should also hold:

$$\begin{aligned} \frac{\lim_{d \to 0} \frac{u_i(B) - u_i(B - d)}{d}}{\lim_{\underline{y} \to d} \frac{u_i(B + \underline{y} - d) - u_i(B)}{\underline{y} - d}} &\leq \frac{\lim_{d \to 0} \frac{\varphi(u_i(B)) - \varphi(u_i(B - d))}{d}}{\lim_{\underline{y} \to d} \frac{\varphi(u_i(B + W - d)) - \varphi(u_i(B + W - \underline{y}))}{\underline{y} - d}} \\ \Rightarrow \frac{u_i'(B)}{u_i'(B)} &\leq \frac{\varphi'(u_i(B))}{\varphi'(u_i(B + W - d))} \\ \Rightarrow 1 &\leq \frac{\varphi'(u_i(B))}{\varphi'(u_i(B + W - d))} \end{aligned} \tag{7}$$

The last inequality is satisfied as long as $W > d$ since $u_i(.)$ is an increasing function and $\varphi(.)$ is an increasing and concave function. Note that influence buying is never rational if $W \leq d$. Hence given that influence buying is rational, the candidate prefers buying the endorse with CP over UFP in equilibrium if the candidate is more risk averse than the influencer.

Conversely, if the influencer is more risk averse than the candidate, $u_i(x) = \phi(u_c(x))$ for all x, where $\psi' > 0$ and $\psi'' < 0$, i.e. $u_i(.)$ is a concave transformation of $u_c(.)$. Then $u_c(x) = \phi(u_i(x))$ where $\phi = \psi^{-1}(.)$ is an increasing and convex function. The candidate prefers UFP over CP if the utility difference given in (4) is greater than zero, or equivalently if

$$\frac{u_i(B) - u_i(B-d)}{u_i(B+\underline{y}-d) - u_i(B)} = \frac{p'}{1-p'} \geq \frac{u_c(B) - u_c(B-d)}{u_c(B+W-d) - u_c(B+W-\underline{y})}$$
$$\frac{u_i(B) - u_i(B-d)}{u_i(B+\underline{y}-d) - u_i(B)} \geq \frac{\phi(u_c(B)) - u_c\phi((B-d))}{\phi(u_c(B+W-d)) - \phi(u_c(B+W-\underline{y}))} \tag{8}$$

Assuming $u_c(.)$ is continuously differentiable, (8) implies

$$\frac{u_c'(B)}{u_c'(B)} \geq \frac{\phi'(u_c(B))}{\phi'(u_c(B+W-d))}$$
$$1 \geq \frac{\phi'(u_c(B))}{\phi'(u_c(B+W-d))} \tag{9}$$

The last inequality is satisfied as long as $W > d$ since $u_i(.)$ is an increasing function and $\phi(.)$ is an increasing and convex function. Therefore, given that influence buying is rational if the candidate is less risk averse than the influencer, the candidate prefers UFP over CP in equilibrium.

A.2 Analysis of the behavior of inequity averse players

Payoffs of Inequity Averse Candidate and Influencer:
Let $(m_{UFP}, m_{CP}) = (x, y)$ be an offer. Influencer's utility from accepting UFP is given by

$$U_i(\text{UFP}, x = z) = \begin{cases} B + (1+2\alpha)z - (1+\alpha)d - \alpha p'W & \text{if } z \in \left[0, \frac{d}{2}\right] \\ B + (1 + 2(\alpha p' - \beta(1-p')))\, z & \\ -\,(1 + \alpha p' - \beta(1-p'))\, d - \alpha p'W & \text{if } z \in \left[\frac{d}{2}, \frac{W+d}{2}\right] \\ B + (1-2\beta)\, z - (1-\beta)\, d + \beta p'W & \text{if } z \geq \frac{W+d}{2} \end{cases} \tag{10}$$

Influencer's utility from accepting CP is given by

$$U_i(\text{CP}, y = z) = \begin{cases} B + p'(1+2\alpha)z - (1+\alpha)d - \alpha p'W & \text{if } z \leq \frac{W+d}{2} \\ B + p'\,(1-2\beta)\, z & \\ -\,(1 + \alpha(1-p') - \beta p')\, d + \beta p'W & \text{if } z \geq \frac{W+d}{2} \end{cases} \tag{11}$$

Candidate's utility from buying endorsement with UFP is given by

$$U_c(\text{UFP}, x = z) = \begin{cases} B + p'(1-\beta)W - (1-2\beta)z - \beta d & \text{if } z \in \left[0, \frac{d}{2}\right] \\ B + p'(1-\beta)W - (1 + 2(\alpha(1-p') - \beta p'))\, z & \\ +\,(\alpha(1-p') - \beta p')\, d & \text{if } z \in \left[\frac{d}{2}, \frac{W+d}{2}\right] \\ B + p'(1+\alpha)W - (1+2\alpha)\, z + \alpha d & \text{if } z \geq \frac{W+d}{2} \end{cases} \tag{12}$$

Candidate's utility from buying endorsement with CP is given by

$$U_c(\text{CP}, y = z) = \begin{cases} B + p'(1-\beta)W - p'(1-2\beta)z - \beta d & \text{if } z \leq \frac{W+d}{2} \\ B + p'(1+\alpha)W - p'\left(1+2\alpha\right)z & \\ +(\alpha p' - \beta(1-p'))d & \text{if } z \geq \frac{W+d}{2} \end{cases} \tag{13}$$

Proposition (Inequity aversion). *Suppose both players are inequity averse and their preferences can be represented by Fehr-Schmidt preferences. Then, if the candidate's rent from winning is sufficiently large* $\left(B < \frac{W+d}{2}\right)$*, influence buying occurs with conditional payment only. Moreover, the minimum payment accepted by the influencer varies with the candidate's rent,* W*.*

Since the influence buying game is a finite game with complete information, we will proceed with backward induction.

Influencer: Minimum accepted up-front and conditional payments

Let $(m_{UFP}, m_{CP}) = (x, y)$ be the candidate's offer. We will solve for the minimum accepted offer for each payment type for the influencer.

Minimum accepted up-front payment

Let $\underline{x}$ be the influencer's minimum accepted up-front payment. Then

$$U_i(\text{UFP}; z = \underline{x}) = U_i(\text{DNE})$$

Note that, up-front payment less than half of the cost of endorsement, $\frac{d}{2}$ is never acceptable:

$$\begin{aligned} U_i\left(\text{UFP}, z < \frac{d}{2}\right) &= B + (1+2\alpha)z - (1+\alpha)d - \alpha p'W \\ &\leq B + (1+2\alpha)\frac{d}{2} - (1+\alpha)d - \alpha p'W \\ &= B - \alpha p'W - \frac{d}{2} \\ &< B - \alpha pW = U_i(\text{DNE}) \end{aligned}$$

Thus assume first that $\underline{x} \in \left[\frac{d}{2}, \frac{W+d}{2}\right]$. Then, $\underline{x}$ satisfies

$$B + \left[1 + 2(\alpha p' - \beta(1-p'))\right]\underline{x} - \left(1 + \alpha p' - \beta(1-p')\right)d - \alpha p'W = B - \alpha pW$$

$$\Rightarrow \underline{x}_1 = \frac{\alpha(p'-p)W + \left(1 + \alpha p' - \beta(1-p')\right)d}{1 + 2(\alpha p' - \beta(1-p'))} \tag{14}$$

Note that $\underline{x} \geq \frac{d}{2}$ for all p':

$$\begin{gathered} 2\alpha(p'-p)W + 2(1 + \alpha p' - \beta(1-p'))d \geq (1 + 2(\alpha p' - \beta(1-p')))d \\ \Rightarrow 2\alpha(p'-p)W + d \geq 0 \end{gathered}$$

However $\underline{x} \leq \frac{W+d}{2}$ for some p':

$$2\alpha(p'-p)W + 2(1+\alpha p' - \beta(1-p'))d \leq (1+2(\alpha p' - \beta(1-p')))\frac{W+d}{2}$$
$$\Rightarrow p' \geq \frac{(2\beta - 2\alpha p - 1)W + d}{2\beta} \tag{15}$$

Next, assume that $\underline{x} \geq \frac{W+d}{2}$. Then

$$B + (1-2\beta)\,\underline{x} - (1-\beta)\,d + \beta p' W = B - \alpha p W$$

$$\Rightarrow \underline{x}_2 = \frac{-(\beta p' + \alpha p)W + (1-\beta)d}{1-2\beta} \tag{16}$$

For $\underline{x} \geq \frac{W+d}{2}$, p' should satisfy

$$-(\beta p' + \alpha p)W + (1-\beta)d \geq (1-2\beta)\frac{W+d}{2}$$
$$\Rightarrow p' \leq \frac{(2\beta - 2\alpha p - 1)W + d}{2\beta} \tag{17}$$

Combining (15) and (17), we get the following minimum accepted up-front payment offers for the influencer, based on the candidate's probability of winning with the endorsement:

$$\underline{x} = \begin{cases} \underline{x}_1 & \text{if } p' \geq \frac{(2\beta - 2\alpha p - 1)W + d}{2\beta} \\ \underline{x}_2 & \text{if } p' \leq \frac{(2\beta - 2\alpha p - 1)W + d}{2\beta} \end{cases} \tag{18}$$

Influencer's minimum accepted conditional payment

For finding the minimum accepted conditional payment by the influencer, $\underline{y}$, assume first that $\underline{y} \in \left[0, \frac{W+d}{2}\right]$. Then

$$U_i\left(\text{CP}, z = \underline{y} \leq \frac{W+d}{2}\right) = U_i(\text{DNE})$$
$$B + p'(1+2\alpha)\underline{y} - (1+\alpha)d - \alpha p' W = B - \alpha p W$$

$$\underline{y}_1 = \frac{\alpha(p'-p)W + (1+\alpha)\,d}{p'(1+2\alpha)} \tag{19}$$

However, note that the found $\underline{y}$ may not be in the assumed interval, so the following inequality also has to be satisfied

$$\underline{y}_1 = \frac{\alpha(p'-p)W + (1+\alpha)\,d}{p'(1+2\alpha)} \leq \frac{W+d}{2}$$
$$\Rightarrow \left[2\alpha(p'-p) - p'(1+2\alpha)\right]W + \left[2(1+\alpha) - p'(1+2\alpha)\right]d \leq 0 \tag{20}$$

If we assume $\underline{y} \in \left[\frac{W+d}{2}, B+W\right]$, then

$$U_i\left(CP, z = \underline{y} \geq \frac{W+d}{2}\right) = U_i(DNE)$$
$$B + p'(1-2\beta)\underline{y} - (1+\alpha(1-p') - \beta p')d + \beta p' W = B - \alpha p W$$

$$\underline{y}_2 = \frac{-(\beta p' + \alpha p)W + (1 + \alpha(1 - p') - \beta p')d}{p'(1 - 2\beta)} \tag{21}$$

Again the found $\underline{y}_2$ has to be in the assumed interval:

$$\underline{y}_2 = \frac{-(\beta p' + \alpha p)W + (1 + \alpha(1 - p') - \beta p')d}{p'(1 - 2\beta)} \geq \frac{W + d}{2}$$

$$\Rightarrow [-2(\beta p' + \alpha p) - p'(1 - 2\beta)]\, W + [2(1 + \alpha(1 - p') - \beta p') - p'(1 - 2\beta)]\, d \geq 0 \tag{22}$$

Combining (20) and (22) we obtain

$$\underline{y} = \begin{cases} \underline{y}_1 & \text{if } p' \geq \frac{2[(1+\alpha)d - \alpha p W]}{(2\alpha+1)d + W} \\ \underline{y}_2 & \text{if } p' \leq \frac{2[(1+\alpha)d - \alpha p W]}{(2\alpha+1)d + W} \end{cases} \tag{23}$$

Influencer: Relation between up-front and conditional payment

Lemma 1. *Let y_x be the utility equivalent conditional payment to an up-front payment of x for the influencer. Then $y_x \geq x$.*

If conditional payment of y_x is equivalent to an up-front payment of x then $U_i(\text{CP}, z = y_x) = U_i(\text{UFP}, z = x)$. Note that the slope of $U_i(\text{UFP})$ is greater than or equal to that of $U_i(\text{CP})$ for all $z \in R$ and $p' \in [0, 1]$:

$$\frac{\partial U_i(\text{UFP})}{\partial z} - \frac{\partial U_i(\text{CP})}{\partial z} = \begin{cases} (1 + 2\alpha)(1 - p') & \text{if } z \leq \frac{d}{2} \\ (1 - 2\beta)(1 - p') & \text{if } z \geq \frac{d}{2} \end{cases}$$

Observe also that $U_i(\text{CP}, z = 0) = U_i(\text{UFP}, z = 0) = B - (1 + \alpha)d - \alpha p' W$. It follows that $y_x \geq x$.

After finding the participation constraint of the influencer for each payment type, we move on to candidate's problem.

Candidate's participation constraint for influence buying with up-front payment

The candidate prefers to buy endorsement with UFP over not buying endorsement if $U_c(z = \underline{x}; \text{UFP}) \geq U_c(.; \text{DNE})$. Assume first that $\underline{x} \in \left[\frac{d}{2}, \frac{W+d}{2}\right]$. Then individual rationality condition is satisfied iff

$$\underbrace{\frac{(1 + \alpha - \beta)}{1 + 2(\alpha p' - \beta(1 - p'))}}_{\geq 0} \left[\underbrace{(p' - p)}_{\geq 0} \underbrace{(1 - 2(\beta + \alpha)(1 - p'))}_{?} W - d \right] \geq 0$$

$$\Rightarrow p'W - d - pW - 2(p' - p)(\alpha + \beta)(1 - p')W \geq 0 \tag{24}$$

Assume next that $\underline{x} \geq \frac{W+d}{2}$. Then the candidate prefers buying endorsement with up-front payment to not buying endorsement if $U_c(z = \underline{x}_2; \text{UFP}) \geq U_c(.; \text{DNE})$

$$B + p'(1 + \alpha)W - (1 + 2\alpha) \left[\frac{-(\beta p' + \alpha p)W + (1 - \beta)d}{1 - 2\beta} \right] + \alpha d \geq B + p(1 - \beta)W$$

$$\Rightarrow \frac{1 + \alpha - \beta}{1 - 2\beta} [p'W - (1 - 2(\alpha + \beta))pW - d] \geq 0 \tag{25}$$

Combining this with (16), we find that UFP$\geq \frac{W+d}{2}$ is individually rational for the candidate iff

$$p' \in \left[(1-2(\alpha+\beta))p + \frac{d}{W}, \frac{(2\beta-2\alpha p-1)W+d}{2\beta}\right] \tag{26}$$

As the final step notice that if $p'W - d < 0$, neither (24) not (25) can be satisfied.

Candidate: Choice between buying endorsement with up-front and conditional payment

Suppose both UFP and CP are rational for the candidate. Then the optimal offer of the candidate depends on the utility difference $U_c(z = \underline{x}; \text{UFP},) - U_c(z = \underline{y}; \text{CP})$. We will consider 3 cases: (1) $\underline{x} = \underline{x}_1$ and $\underline{y} = \underline{y}_1$, where $\underline{x}_1, \underline{y}_1 \leq \frac{W+d}{2}$, (2) $\underline{x} = \underline{x}_1$ and $\underline{y} = \underline{y}_2$, where $\underline{x}_1 \leq \frac{W+d}{2}$ and $\underline{y}_1 \geq \frac{W+d}{2}$, (3) $\underline{x} = \underline{x}_2$ and $\underline{y} = \underline{y}_2$, where $\underline{x}_2, \underline{y}_2 \geq \frac{W+d}{2}$.

Case 1: Suppose first that $\underline{y} = \underline{y}_1 \leq \frac{W+d}{2}$. Then by Lemma 1, $\underline{x} \leq \underline{y} \leq \frac{W+d}{2}$, i.e. $\underline{x} = \underline{x}_1$. By (18) and (23), $p' \geq \max\left\{\frac{2[(1+\alpha)d-\alpha pW]}{(2\alpha+1)d+W}, \frac{(2\beta-2\alpha p-1)W+d}{2\beta}\right\}$. In this case the utility difference $U_c(\text{UFP}) - U_c(\text{CP})$ can be simplified to

$$\frac{2(\alpha+\beta)(1+\alpha-\beta)(p'-1)}{(1+2\alpha)(1+2(\alpha p'-\beta(1-p')))}\left[2\alpha(p'-p)W+d\right] \leq 0 \tag{27}$$

Therefore influence buying with UFP is dominated by influence buying with CP if $\underline{x} = \underline{x}_1$ and $\underline{y} = \underline{y}_1$.

Case 2: Suppose now that $\underline{y} = \underline{y}_2$ and $\underline{x} = \underline{x}_1$. Then by (18) and (23),

$$p' \in \left[\frac{(2\beta-2\alpha p-1)W+d}{2\beta}, \frac{2[(1+\alpha)d-\alpha pW]}{(2\alpha+1)d+W}\right]$$

Then the utility difference of influence buying with UFP over CP can be simplified into

$$K\left[\left[1+2\alpha p-2\beta(1-p')\right]p'W - \left[1-2\beta(1-p')^2+2\alpha(1-p')p'\right]d\right] \tag{28}$$

where

$$K = \frac{-2(\alpha+\beta)(1+\alpha-\beta)}{(1-2\beta)(1+2(\alpha+\beta)p'-2\beta)}$$

Note that W's coefficient is strictly less than zero. This is because $(1+2\alpha p-2\beta(1-p')) \leq 0 \Leftrightarrow p' \leq 1 - \frac{1+2\alpha p}{2\beta}$, but p' is less than a number between 0 and 1 only if $\frac{1+2\alpha p}{2\beta} \leq 1$, which implies that $1 \leq 2(\beta - \alpha p)$. For $0 < \beta \leq \alpha$ and $\alpha + \beta < 1$ the previous inequality cannot hold. Thus it must be that $(1+2\alpha p-2\beta(1-p')) > 0$. Hence the utility difference $U_c(\text{UFP}) - U_c(\text{CP})$ decreasing in W. Denote the rent that satisfies $U_c(\text{UFP}) = U_c(\text{CP})$ as $\tilde{W}$. Then for $W < \tilde{W}$, UFP dominates CP and vice versa. From (28), we find $\tilde{W}$ as

$$\tilde{W} = \left(\frac{1-2\beta(1-p')^2+2\alpha(1-p')p'}{1+2\alpha p-2\beta(1-p')}\right)\left(\frac{d}{p'}\right) \tag{29}$$

Now consider the candidate's individual rationality for influence buying with UFP. The utility difference $U_c(\text{UFP}) - U_c(\text{No Offer})$ with $W = \tilde{W}$ can be simplified into

$$\frac{1+\alpha-\beta}{1+2(\alpha p'-\beta(1-p'))}\left[(p'-p)(1-2(\alpha+\beta))(1-p')\tilde{W} - d\right] \tag{30}$$

$1+2(\alpha p' - \beta(1-p'))$ is always non-negative for $\beta \leq \frac{1}{2}$. Thus the sign of this expression depends on the sign of the parenthesis. Combining (29) and (30), we find that $U_c(UFP) - U_c(\text{No Offer}) \leq 0$ at $W = \tilde{W}$. As a result, we show that if influence buying with UFP dominates CP in case 2, it is also the case that influence buying with UFP is not rational for the candidate. Hence influence buying with UFP should not occur in case 2.

Case 3: Suppose now that $\underline{y} = \underline{y}_2$ and $\underline{x} = \underline{x}_2$. Then by (18) and (23),

$$p' \leq \min\left\{\frac{(2\beta - 2\alpha p - 1)W + d}{2\beta}, \frac{2[(1+\alpha)d - \alpha pW]}{(2\alpha+1)d + W}\right\}$$

The utility difference of influence buying with UFP over CP can be simplified into

$$\frac{1+2\alpha}{1-2\beta}(\alpha+\beta)(1-p')d \geq 0 \tag{31}$$

implying that the candidate prefers influence buying with UFP over CP in this case. However if $B < \frac{W+d}{2}$, the candidate will be unable to offer $\underline{x}_2$ to the influencer due to his budget constraint: the largest possible UFP offer is B.

Rationality of UFP in Case 3 if $B > \frac{W+d}{2}$

Note that Case 3 occurs if $p' \leq \min\left\{\frac{(2\beta-2\alpha p-1)W+d}{2\beta}, \frac{2[(1+\alpha)d-\alpha pW]}{(2\alpha+1)d+W}\right\}$. Thus for case 3 to exist, both $\frac{(2\beta-2\alpha p-1)W+d}{2\beta}$ and $\frac{2[(1+\alpha)d-\alpha pW]}{(2\alpha+1)d+W}$ need to be positive. This can occur only if $(2\beta-2\alpha p-1)W+d > 0$ and $(1+\alpha)d - \alpha pW > 0$, which implies that

$$\frac{d}{W} > \max\left\{1+2\alpha p - 2\beta, \frac{\alpha}{\alpha+1}p\right\} = 1 + 2\alpha p - 2\beta$$

for $\alpha \geq \beta > 0$ and $\alpha + \beta < 1$. Note also that we need $\alpha p < \beta$, since $\frac{d}{W}$ cannot be strictly greater than 1 for $d < W$. Individual rationality condition of the candidate for UFP= $\underline{x}_2$ is satisfied only if

$$p' - p \geq \frac{d}{W} - 2(\alpha+\beta)p$$

Thus the following conditions need to hold for UFP= $\underline{x}_2$ to be rational:

i. $\frac{d}{W} > 1 + 2\alpha p - 2\beta$

ii. $\alpha p < \beta$

iii. $p' \leq \min\left\{\frac{(2\beta-2\alpha p-1)W+d}{2\beta}, \frac{2[(1+\alpha)d-\alpha pW]}{(2\alpha+1)d+W}\right\}$

iv. $p' - p \geq \frac{d}{W} - 2(\alpha+\beta)p$

We find that all of these conditions are satisfied and hence influence buying with UFP= $\underline{x}_2$ is rational for a candidate for whom $\frac{d}{W} > (1-2\beta)\left[1 + \frac{2\beta}{W}\right]$. Otherwise UFP= $\underline{x}_2$ is never rational. Note that the number on the right is decreasing in β, i.e. higher inequity aversion is correlated with higher likelihood of the candidate finding UFP= $\underline{x}_2$ rational. Also, the higher the ratio of cost of endorsement to the prize, the more likely that a candidate will find UFP= $\underline{x}_2$ rational.

Candidate: Rationality of influence buying with conditional payment

We finally need to show that there are cases in which the candidate prefers influence buying with conditional payment to not buying endorsement.

Suppose that $\underline{y} = \underline{y}_1 \leq \frac{W+d}{2}$ (which implies $p' \geq \frac{2[(1+\alpha)d-\alpha pW]}{(2\alpha+1)d+W}$). Then buying endorsement with conditional payment is individually rational for the candidate iff

$$\frac{1+\alpha-\beta}{1+2\alpha}\left[(p'-p)W-d\right] \geq 0 \tag{32}$$

Combining the $\underline{y} = \underline{y}_1$ condition on p' and the individual rationality constraint given above we find that if $(p'-p)W-d \geq 0$ and $p \leq \frac{d(W-d)}{W(W+d)}$, influence buying with CP=$\underline{y}_1 \leq \frac{W+d}{2}$ is rational.

Next, suppose that $\underline{y} = \underline{y}_2 \geq \frac{W+d}{2}$ (which occurs if $p' \leq \frac{2[(1+\alpha)d-\alpha pW]}{(2\alpha+1)d+W}$). Then buying endorsement with conditional payment is individually rational for the candidate iff

$$p' \geq \frac{(1-2(\alpha+\beta))pW+(1+2(\alpha+\beta))d}{W+2(\alpha+\beta)d} \tag{33}$$

Note that if $1-2(\alpha+\beta) > 0$, $p'W-d < 0$ is sufficient for nonrationality of CP= $\underline{y}_2$. Thus, for a candidate who has sufficiently strong inequity aversion it might be possible that paying $\underline{y}_2$ is rational. To see if this is indeed the case, we combine the inequalities on p' obtained from the individual rationality constraint and the condition on p' for $\underline{y} = \underline{y}_2$. Thus influence buying with CP= $\underline{y}_2$ is rational if p' satisfies

$$\frac{(1-2(\alpha+\beta))pW+(1+2(\alpha+\beta))d}{W+2(\alpha+\beta)d} \leq p' \leq \frac{2\left[(1+\alpha)d-\alpha pW\right]}{(2\alpha+1)d+W} \tag{34}$$

A.3 Instructions

Instructions

General

Welcome and thank you for coming today to participate in this experiment. This is an experiment in decision-making. If you follow the instructions and make good decisions, you can earn a significant amount of money, which will be paid to you at the end of the session. The currency in this experiment is called tokens (10 tokens = 1USD). The experiment consists of 20 identical decision rounds.

During the experiment it is important that you do not talk to any other subjects. Please either turn off your cell phones or put them on silent. If you have a question, please raise your hand, and an experimenter will answer your question. Failure to comply with these instructions means that you will be asked to leave the experiment and all earnings will be forfeited. The experiment will last about 60 minutes.

Roles

At the beginning of the experiment you will be randomly assigned a role. The two possible roles you can be assigned are `**Voter**' and `**Candidate**'. There will be an equal number of voters and candidates. Your roles will stay fixed for all 20 rounds until the end of the experiment. That is, if at the beginning of the experiment you were assigned the role of a candidate (voter), you will keep this role for the entire experiment.

At the beginning of <u>each round</u>, all participants will be randomly paired, with each pair consisting of one voter and one candidate. Since you are most likely to be matched with a different participant in each round, it will be impossible to track your counterpart between rounds. No participant will ever be informed about the identities of the participants they are paired with, neither during nor after the experiment.

In this experiment, at each round, both the voter and the candidate are assigned **20 tokens**. Each round, **the candidate** has the chance to win **200 additional tokens**. Whether the candidate wins the additional tokens is determined randomly by the computer in the following way: The candidate wins the election (and hence the additional 200 tokens)if the computer draws a **WHITE** ball from an urn that contains RED and WHITE balls. The total number of balls contained in the urn is fixed at 100, but the number of white balls in the urn will change from one round to another.

The voter can increase the number of white balls (by exchanging them with red balls) in the urn by voting for the candidate. However, this costs **10 tokens** to the voter.

Payment Types

A payment is what a candidate can offer the voter in exchange for their vote. The payment is in terms of tokens and it can take two possible forms, "Up-front Payment" and "Conditional Payment".

- An up-front payment, if accepted by the voter, is paid to the voter prior to the election.
- A conditional payment, if accepted by the voter, is paid to the voter **if the candidate wins** (i.e. payment is conditioned on the candidate winning the election) and hence paid after the election.

Development of each round

For each group, each of the 20 rounds consists of an election process with the following sequence of events:

1. Both the candidate(C) and the voter (V) are informed about the following:
   - Number of white balls in the urn
   - Number of white balls in the urn if the voter votes for the candidate

2. In each group, the candidate decides on the number of tokens he/she offers for each type of payment. The offer cannot be greater than what the candidate owns at the time of payment.

   Note that this implies that an up-front payment cannot be greater than 20 tokens, and a conditional payment cannot be greater than 220 tokens.

3. Once the candidate submits his/her offers, the voter is informed about these offers. The voter is then asked to choose among the following options: (a) Accept Up-front Payment in exchange for Vote, (b) Accept Conditional Payment in exchange for Vote, (c) Do not accept payment.

4. Both V and C learn about voter's choice over the candidate's offer. If the voter has accepted Up-front Payment, the amount accepted is transferred to the voter's account.

5. Voter decides whether to vote or not. Number of white balls is adjusted corresponding to the voter's choice over voting or not voting for C.

6. The computer draws a ball from the urn, and announces its color. Both V and C are informed about the result of the election.

7. If the voter has accepted Conditional Payment and the candidate has won the election, the candidate decides whether or not to make the agreed payment.

8. Payoffs realize.

Earnings

Earnings depend on whether the voter voted for the candidate, which offer he/she accepted an offerfrom the candidate and the color of the drawn ball. The following tables summarize this information for the voter and the candidate, respectively.

Voter

Earnings		Color of the ball drawn from the urn	
		White	Red
Voter chooses	Up-front payment	20 + Up-front payment – 10	20+ Up-front payment – 10
	Conditional payment	20 + Conditional payment – 10	20–10
	Voting w/o payment	20–10 = 10	20–10
	Not to vote	20	20

Candidate

Earnings		Color of the ball drawn from the urn	
		White	Red
Voter chooses	Up-front payment	20+200 – Up-front payment	20 – Up-front payment
	Conditional payment	20+200 – Conditional payment	20
	Voting w/o payment	20+200 = 220	20
	Not to vote	20+200	20

Final earnings

Once all 20 rounds are finished, the computer will randomly pick **one** round out of the 20 rounds you have played. The earnings you made on that round will be your final earnings of the experiment. We will convert tokens you earned in this round into US dollars by dividing them by 10. In addition, you will receive a participation fee of 5 USD.

Are there any questions?