Disclosing Decision Makers’ Private Interests

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Disclosure of private interests

- Delegation and conflict of interests.

- Disclosure of the private interests is one of the remedies prescribed most often (Stark, 2003).

- By being aware of the private interests,
  - public can form its own judgement
  - force decision makers to behave according to the public interest.

- Disclosure broadly perceived as a good solution without the controversies of other remedies such as
  - Recusal
  - Divesture/Blind-Trust
  - Balance of interests (committees)
Politics

- **Distrust in political power increased the demand** for more financial and personal information about public officials (Cain, 2014).

- **Level of transparency and public available information still differs** within countries and branches of the government (Djankov et. al., 2010).
  - 109 of 175 countries had disclosure laws.
  - Only 63 granted public access to the disclosed information.

- Transparency International, World Bank and OECD stand for **extending disclosure**.
Academic research

- **Ties between academic scientists and private industry** under scrutiny.

- Many universities and peer-reviewed journals have **adopted disclosure policies**.

- These policies are taken very seriously:
  - Disclosure policy of the EUI was behind the resignation of its president in 2011.
  - Failure to declare revenues of 300,000 euros a year as a board member of the Spanish energy company Abengoa.
Doctors face the accusation that the **gifts they receive from pharmaceutical companies influence their drug’s prescription practices.**

The accusation is based on **reasonable grounds:**

- Doctors who had enjoyed industry-sponsored meals had **higher rates of prescription** (DeJong et al., 2016).

American Senate introduced Physician Payments Sunshine Act in 2010 that requires medical product manufacturers to **disclose any payment made to physicians.**
Research question

- Which is the effect of disclosing decision makers’ private interests on the quality of the decisions?
What I do

- **Informed decision maker** takes a decision.

- Decision maker **always has some private interests**.

- Decision maker has **career concerns**.

- Compare Disclosure of the Private Interest vs Non-Disclosure.
Related literature

- **Transparency of Careerist Decision Makers’ actions:**
  - Decision makers may choose the action that makes them appear informed/unbiased which is not always the best action.

- **Perverse reputational incentives:**

- **Disclosure of Expert bias in advising:**
  - Non disclosure can allow for more precise communication.
The model

- A decision maker $DM$ takes a decision $d \in \Omega$.
  - We will assume that $\Omega = \{a, b\}$.

- There is a state of the world $\omega \in \Omega$.
  - $\omega$ is unknown but it is common knowledge that both states can occur with equal probability.

- Before the decision is taken, $DM$ receives a private signal $s \in \Omega$ about $\omega$.

- $s$ is partially informative of $\omega$. In particular $q = Pr(s = \omega | \omega)$, where $q > \frac{1}{2}$ is the precision.
Correct decisions and private interests

- Correctness of decision depends on $\omega$. A decision is correct if $d = \omega$. Otherwise it is wrong.

- All DM have some private interest $\beta \in \Omega$.
  - All $\beta$ equally likely and uncorrelated with $\omega$.

- 2 types of DM:
  - Good types ($\theta = 1$) care about taking correct decisions ($d = w$).
  - Bad types ($\theta = 0$) care about matching the decision with their private interest ($d = \beta$).

- Type $\theta$ is private information of DM. Fraction of good types is $\mu \in (0, 1)$.
Career concerns and reputation

- In addition to $DM$, there is also an evaluator $E$.

- Task of $E$ is just to **update the beliefs about** $\theta$.

- We will call **reputation** to this beliefs.
  
  - No Disclosure: $R(\omega, d) = E[\theta|\omega, d]$.
  
  - Disclosure: $R(\beta, \omega, d) = E[\theta|\beta, \omega, d]$.

- Utility of $DM$:

  $$U_\theta^\beta(\omega, d) = 1_{d=\omega} \theta + 1_{d=\beta}(1 - \theta) + \phi R$$

  $\phi > 0$ measures the importance of **career concerns**.
A strategy of $DM$ is a mapping $\alpha_\theta : (\beta, s) \in \Omega \times \Omega \rightarrow d \in \Omega$.

Some useful strategies:

- **Follow signal**: $\alpha_\theta (\beta, s) = s$.
- **Follow private interest**: $\alpha_\theta (\beta, s) = \beta$.
- **Contradict private interest**: $\alpha_\theta (\beta, s) = \beta^c$.

Decision makers maximize their utility.

Evaluator’s beliefs computed by **Bayes’ rule**
The timing of the game is the following:

1. $\omega \in \Omega$ is realized and $DM$ receives a private signal $s \in \Omega$ about $w$.

2. $DM$ takes a decision $d \in \Omega$.

3. $E$ updates the reputation of $DM$:
   - No Disclosure: $E$ observes $(\omega, d)$ and forms beliefs on $\theta$.
   - Disclosure: $E$ observes $(\omega, \beta, d)$ and forms beliefs on $\theta$.

4. Payoffs are realized.
No disclosure

\[
R(\omega, d) = \frac{\mu \sum_{\beta', s'} Pr(s=s'|\omega)Pr(\alpha_1(\beta', s')=d)}{\mu \sum_{\beta', s'} Pr(s=s'|\omega)Pr(\alpha_1(\beta', s')=d) + (1-\mu) \sum_{\beta', s'} Pr(s=s'|\omega)Pr(\alpha_0(\beta', s')=d)}
\]

- Relevant information for \(E\) is whether \(DM\) took the correct decision.

**Proposition**

*For all \((q, \mu)\), there exists an equilibrium such that*

- *When \(\phi \leq \bar{\phi}_{ND}(q, \mu)\), Good types follow their signal and Bad types follow their private interests.*

- *When \(\phi > \bar{\phi}_{ND}(q, \mu)\) Good types follow their signal and Bad types mix between following the signal and the private interests.*
Reputational incentives

\[ R \]

\[ \begin{align*}
R(\omega, \omega) & \quad \text{(solid line)} \\
R(\omega, \omega^c) & \quad \text{(dashed line)}
\end{align*} \]
Disclosure

\[ R(\beta, \omega, d) = \frac{\mu \sum_{s'} Pr(s=s'|\omega)Pr(\alpha_1(\beta, s')=d)}{\mu \sum_{s'} Pr(s=s'|\omega)Pr(\alpha_1(\beta, s')=d) + (1-\mu) \sum_{s'} Pr(s=s'|\omega)Pr(\alpha_0(\beta, s')=d)} \]

- Given that Bad types always value more following the private interests than Good types:

**Lemma**

In equilibrium,

\[ R(\beta, \beta^c, \beta^c) \geq R(\beta, \beta, \beta) \geq R(\beta, \beta^c, \beta) \]

- Bad types always experience trade-off between reputation and present utility.
- Distortion of incentives: when \( s = \beta \), good types also experience a trade-off:
Reputational incentives
Reputational incentives
The “nothing changes” equilibrium (NCE)

Proposition

When \( \phi < \bar{\phi}_D \), there exists an equilibrium such that Good types follow signal and Bad types follow private interest.

- When reputational incentives are low enough, reputational gains do not compensate the immediate losses.
- In this equilibrium, the probability of taking correct decisions does not change.
- Nevertheless, disclosure lowers the threshold such that this equilibrium exists:

\[
\bar{\phi}_D < \bar{\phi}_{ND}
\]
The disciplining effect equilibrium (DEE)

- Let $\phi_B$ and $\phi_G$ be the maximum reputational concerns that make Bad and Good types do not deviate from the NCE.
  \[
  \bar{\phi}_D = \min\{\phi_B, \phi_G\}
  \]

- We want to find an equilibrium such that Good types keep following the signal and Bad types mix between following the signal and the private interest.

- This happens when $\phi \in (\phi_B, \phi_G)$.

- But when is $\phi_B < \phi_G$?
The disciplining effect equilibrium

Lemma

\( \phi_B < \phi_G \) if and only if \( \mu > \bar{\mu}(q) = \frac{2(1-q)}{1-4(1-q)q^2}. \)
The disciplining effect equilibrium

Proposition

When \( \mu > \tilde{\mu}(q) \) and \( \phi \in [\phi_B, \phi_G] \), there exists an equilibrium such that Good types follow their signal and Bad types mix between following the signal and the private interest.

- Recall that when \( \phi \) was high enough, without disclosure, Bad types also mixed between following the signal and their private interest in equilibrium. However,

Corollary

In the DEE, Bad decision makers follow the signal with higher probability than in the non-disclosure equilibrium and probability of taking correct decisions is higher.
The pandering equilibrium

Proposition

There exists an equilibrium such that Good decision makers always contradict their private interest if and only if $2q - 1 < \phi$. In particular, this equilibrium is such that:

1. If $\phi \in (2q - 1, 1]$, Good types contradict their private interest and Bad types follow it.
2. If $\phi \in (1, \frac{1}{\mu})$, Good types contradict their private interest and Bad types mix between contradicting and following it.
3. If $\phi \geq \frac{1}{\mu}$, Good and Bad types contradict their private interest.

In this equilibrium, the probability of taking correct decisions is lower.
To wrap up

When $\mu \geq \bar{\mu}(q)$
To wrap up

When $\mu < \bar{\mu}(q)$
The political agency model

We reframe the model into a political agency model with two periods.

- In period 1, there is an incumbent politician.
- Between periods 1 and 2, voters reelect the incumbent or appoint a new one.
- In each period, \( DM \) takes a decision and the state of the world \( \omega_2 \) in \( t = 2 \) is not correlated with the state of the world \( \omega_1 \) of period 1.
- Reelection probability is \( R \) and \( \phi \) measures the importance of reelection.
The political agency model

- If decision makers did not change their strategies,
  
- Disclosure would always improve sorting
  
  - Strategy of bad types depends on private interest.
  
  - Knowing the private interest gives information about the type of the decision maker.

- However, disclosure changes the equilibrium strategies of decision makers.

- The effect on sorting is not trivial.
The political agency model

Proposition

Disclosure of politicians’s private interest,

(i) Increases the probability of having a good politician in the Nothing Changes Equilibrium.

(ii) Decreases the probability of having a good politician in the Disciplining Effect Equilibrium.

(iii) Increases the probability of having a good politician in the Pandering Equilibrium if $\phi < \phi_m$.

(iv) Decreases the probability of having a good politician in the Pandering Equilibrium if $\phi > \phi_m$. 
Multiple decisions

- We have assumed that the space of states, private interests and decisions was dichotomic ($\#\Omega = 2$).

- What happens when there $\#\Omega = n > 2$?

- Let $\Omega_n = \{\omega_1, \cdots, \omega_n\}$.

- All states ex-ante equally likely $Pr(\omega = \omega_i) = \frac{1}{n}$.

- Signal such that $q = Pr(s = \omega | \omega) > \frac{1}{n}$ (informative).
Multiple decisions

- Creates higher incentives to follow the signal.

- Good types face higher cost from contradicting signal.
  
  - Probability of taking the correct decision when doing so is $\frac{1-q}{n-1}$, which is decreasing in $n$.

- Bad types face higher reputational cost from following private interest.
  
  - Probability of obtaining good reputation contradicting the signal is lower too.
Multiple decisions

**Proposition**

If $\mu > \mu(q, n)$, there always exists a $\phi > 0$ such that a Disciplining Effect equilibrium exists. Moreover, $\mu(q, n)$ is decreasing in $n$.

**Figure:** Values of $q$ and $\mu$ such that a Disciplining Effect equilibrium exists. From $n = 2$ (dark) to $n = 6$ (light).
Multiple decisions

Lemma

The probability of taking a correct decision contradicting the private interest is increasing in $n$.

- when $n = 2$, contradicting the private interest implies ignoring the signal because there is only one way to contradict the private interest.
- when $n > 3$, among all the possible decisions that involve contradicting the private interest, Good types can choose the one that matches the signal except when the private interest and the signal coincide.

Proposition

When $n > 2$, more correct decisions are taken in the Pandering Equilibrium than without disclosure if and only if $\phi > \hat{\phi}$. 
Observability of the state of the world

- We assumed that the evaluator observed the state of the world. What happens if he does not?

- Without disclosure, all types ignore their career concerns.

- Good types take correct decisions and Bad types follow their private interest.

- With disclosure, the only thing that can increase reputation is contradicting the private interest.

- Disclosure of the private interest can only lead to Pandering Equilibria.
Strictly careerist good decision makers

- We assumed that Good types cared about taking correct decision. What happens if they do not?

- With disclosure, Good types always contradict private interest.

### Corollary

*When good decision makers only have career concerns, disclosure always reduce the probability of taking correct decisions.*
Disclosure of decision makers’ private interests can decrease the probability of taking correct decisions.

It generates incentives for pandering.

It should be used wisely.

Do not ask for disclosure when

- Decision makers are poorly informed.
- Reputation is much more important than the private interests.
Disclosure in Politics

- What do they disclose?
  - Identity of the donors of the campaign.
  - Personel holdings of politicians

<table>
<thead>
<tr>
<th>Disclosure</th>
<th>Total cases</th>
<th>%</th>
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<tbody>
<tr>
<td>Required by law</td>
<td></td>
<td></td>
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<tr>
<td>Publicly available</td>
<td>63</td>
<td>37%</td>
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<tr>
<td>Law silent</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td>Only to the congress</td>
<td>42</td>
<td>24%</td>
</tr>
<tr>
<td>Not Required</td>
<td>66</td>
<td>38%</td>
</tr>
</tbody>
</table>

Table: Disclosure of holdings of politicians by Djankov, La Porta, Lopez-de-Silanes and Shleifer (2010)
Distribution of the sample:

- 45 Sub-Saharan Africa;
- 19 Middle-East and North Africa;
- 7 South Asia;
- 28 East/central Europe and Central Asia;
- 23 from East Asia and Pacific;
- 30 from Latin America and Caribbean;
- 23 from OECD.
The Trade-off

- Let $\Delta R(\omega) = R(\omega, \beta, \beta^c) - R(\omega, \beta, \beta) \geq 0$

- When $s = \beta$:
  - Good types prefer $\beta$ if:
    \[
    2q - 1 \geq \phi(q\Delta R(\beta) + (1 - q)\Delta R(\beta^c)) \tag{1}
    \]
  - Bad types prefer $\beta$ if
    \[
    1 \geq \phi(q\Delta R(\beta) + (1 - q)\Delta R(\beta^c)) \tag{2}
    \]

- When $s = \beta^c$
  - Good types always prefer $\beta^c$.
  - Bad types prefer $\beta^c$ if:
    \[
    1 \leq \phi(q\Delta R(\beta^c) + (1 - q)\Delta R(\beta)) \tag{3}
    \]
The Trade-off

- Let $\Delta R(\omega) = R(\omega, \beta, \beta^c) - R(\omega, \beta, \beta) \geq 0$
- When $s = \beta$:
  - Good types prefer $\beta$ if:
    \[ 2q - 1 \geq \phi(q\Delta R(\beta) + (1 - q)\Delta R(\beta^c)) \] (1)
  - Bad types prefer $\beta$ if
    \[ 1 \geq \phi(q\Delta R(\beta) + (1 - q)\Delta R(\beta^c)) \] (2)
- When $s = \beta^c$
  - Good types always prefer $\beta^c$.
  - Bad types prefer $\beta^c$ if:
    \[ 1 \leq \phi(q\Delta R(\beta^c) + (1 - q)\Delta R(\beta)) \] (3)
The Disciplining Effect Equilibrium

Why $q$ has to be large?

- High $q$ → Good types have high opportunity costs of contradicting private interest.

- High $q$ → Probability that Good types took the correct decision is higher → Large reputational incentives of following signal.

Why $\mu$ has to be large?

- High $\mu$ → Higher reputation from not contradicting the private interest (especially for Good types)
Reputational incentives

\[ R(\beta, \omega, \beta^c) \]

\[ R(\beta, \beta, \beta) \]

\[ R(\beta, \beta^c, \beta) \]
Other remedies:

- Recusal: removes the interested decision maker from any conflicting decision.

- Divestiture/Blind-trust: removes any conflicting interests from the decision-maker.

- Balance of interests: plural committees.

They require a precise definition of the conflict of interests.