A Positive Theory of Discretionary Policy, the Cost of Democratic Government and the Benefits of a Constitution - Errata

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A Positive Theory of Discretionary Policy, the Cost of Democratic Government and the Benefits of a Constitution - Errata

Alex Cukierman and Allan H. Meltzer

It was pointed to us by Shmuel Ben-Zvi that the article overlooks the fact that the government can increase the precision of its forecast of \( x_t \), as of the beginning of period \( t \), by using the signal \( y_{t-1}^1 \) in addition to the signal \( y_t^0 \). Incorporation of this additional information into the government's information set changes none of the qualitative results of the paper but it does affect some of the algebra. The necessary changes are detailed in what follows.

1) Equation (7c) on page 372 and the line immediately following it should be replaced by

\[
a_t = \frac{1}{2}E_{t} (x_t + x_{t+1}) = \frac{1}{2}(\rho \bar{y}_t + \theta y_{t}^1)
\]

where \( \rho = \frac{\sigma_{\epsilon}^2}{(2\sigma_{\epsilon}^2 + \sigma_{x}^2)} \), \( \theta = \frac{\sigma_{x}^2}{(2\sigma_{\epsilon}^2 + \sigma_{x}^2)} \),

\[
\bar{y}_t = (y_t^0 + y_{t-1}^1)/2 \text{ and } t = 1, \ldots, n.
\]

2) Whenever \( y_{t-1} \) appears in equation (8b) on page 373 it should be replaced by \( y_{t-1}^1 \).

3) Equation (8c) on page 373 should be replaced by

\[
EV_{t+1} = E[(\frac{1}{2}(\rho \bar{y}_t + \theta y_{t}^1) - x_t)^2 + (\frac{1}{2}(\rho \bar{y}_t + \theta y_{t}^1) - x_{t+1})^2] =

= [2 - (\theta + \rho)/2] \sigma_{x}^2.
\]

4) Equations (15) on page 375 and the line immediately following it should be
(a) $a_t = (1/2)(\rho y_t + \theta y_t^1)$  $t = 1, \ldots, n-1$

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(b) $a_n = \rho \bar{y}_n$

where, as before, $\rho \equiv 2\sigma_x^2/(2\sigma_x^2 + \sigma_e^2)$ and $\theta \equiv \sigma_e^2/(\sigma_x^2 + \sigma_e^2)$.

On the same page nine lines below the above change $a_n = \theta y_n^0$ should be replaced by $a_n = \rho \bar{y}_n$.

5) The unnumbered equation in the second half of page 375 should be replaced by

\[ E_pn(a_n - x_{n+1})^2 = E_pn[(\rho/2)(x_{n+1}^0 + \epsilon_{n+1}^1) - x_{n+1}]^2 \]

The second line following this equation should start with:

...distribution of $x$, $\epsilon^0$, $\epsilon^1$ and $\rho$ but...

6) The first unnumbered equation on page 376 should read

\[ EL^* = \{1+(1+p)/(2(n-1))-(3+(n-1)(\rho+\theta)/2)\}\sigma_x^2 \]

where $p$ is the $p$ ratio of the previous government.

7) Equation (16) at the bottom of page 376 and the beginning of page 377 should be replaced by

\[ E[(\rho \bar{y}_n - x_n)^2 + (\rho \bar{y}_n - x_{n+1})^2 - ((1/2)(\rho \bar{y}_n + \theta y_n^1) - x_n)^2 - ((1/2)(\rho \bar{y}_n + \theta y_n^1) - x_{n+1})^2] = (1+\rho)\sigma_x^2. \]

8) The beginning of the second paragraph of section IV and page 377 should read:

Suppose all members of the public know $a_1, \ldots, a_n$, $x_1, \ldots, x_n$, $y_1^0, \ldots, y_n^0$ and $y_1^1, \ldots, y_{n-1}^1$ in the last period before the elections.
The unnumbered equation that follows this paragraph should be:

\[ y_t^0 - x_t = \epsilon_t^0, \quad t=1,\ldots,n \] and

\[ y_t^1 - x_{t+1} = \epsilon_t^1, \quad t=0,\ldots,n-1. \]

9) The following changes should be introduced in footnote 17 at the bottom of page 377:

a) In third line \( a_n = \theta y_n^0 \) should be replaced by \( a_n = \rho y_n \).

b) In fourth line \( a_{n-1} = \theta y_{n-1}^0 \) should be replaced by \( a_{n-1} = \rho y_{n-1} \).

c) In eight line \( \theta \sigma_X^2 \) should be replaced with \( (1+\rho)\sigma_X^2 \).

10) The first line of page 378 should be

...and by using the series of observations on \( \epsilon_t^0 \) and \( \epsilon_t^1 \) to...

11) The (unnumbered) equation on page 378 should be

\[ \sum_{t=1}^{n} (\epsilon_t^0 + \epsilon_{t-1}^1)/2n \]

12) In the last and third lines from bottom of third paragraph on page 379

\( a_n = \theta y_n^0 \) should be replaced with \( a_n = \rho y_n \).

13) Equations (36a) and (36b) on page 384 should be

\[ (a) \quad a_t = (\beta/2)(\theta y_t + \theta y_t^1), \quad t=1,\ldots,n-1 \]

(36)

\[ (b) \quad a_n = \beta\rho y_n \]

14) In the fourth line of the second paragraph of page 384

\( \theta \sigma y_n^0 \) should be replaced by \( \rho \sigma y_n \).

15) Equation (38) on page 384 should be
\[ a_t = (\bar{\beta}'/2)(\rho y_t + \theta y_t^1) \]

16) Equation (40) on page 385 should be

\[ E_{L_S} = [k_s + \bar{\beta}(\beta/2 - \beta_s)((n+1)\rho + (n-1)\theta)]\sigma_x^2 \]

where

\[ k_s = 2[n\beta_X^2 + \bar{\beta}(\beta/2 - \beta_s)\rho_p] \]

17) The following changes occur in the paragraph following equation (40) on page 385

a) In second line \( \beta_s = k(n)\bar{\beta} \) should be replaced with \( \beta_s = \bar{\beta}/2 \).

b) In third line \( \beta_s > k(n)\bar{\beta} \) should be replaced with \( \beta_s > \bar{\beta}/2 \) and in ninth line \( \beta_s < k(n)\bar{\beta} \) should be replaced with \( \beta_s < \bar{\beta}/2 \).

18) The last unnumbered equation on page 385 and the immediately following line are:

\[ E_L = \sum_{w=1}^{W} k_w \left[ \sum_{w=1}^{W} k_w - ((n+1)\rho + (n-1)\theta)(\bar{\beta}/2) \right] \sigma_x^2. \]

It follows that governments...

Finally this is a convenient place to correct a couple of typos; 1) on thirteenth line of page 371 \( z_t \) should be \( a_t \). 2) In footnote 14 and in the references Milgram should be Milgrom.