The Political Cost of Reforms

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May 2012

Motivation

- why do governments often fail to adopt welfare-improving reforms?
- economists' popular answers:
  - interest groups may lobby against reforms (e.g., Grossman & Helpman, 2001)
  - uncertainty about gains and losses
    $\longrightarrow$ *status quo* bias (Fernandez & Rodrik, 1991)
    $\longrightarrow$ war of attrition (Alesina & Drazen, 1991)
- a politician's answer:

"We all know what to do, but we don't know how to get reelected once we have done it." Jean-Claude Junker

- yet, ever since Peltzman (1992), no evidence that reforms are punished by voters

The Political Cost of Reforms

- a puzzle: if reforms are not punished by voters, why are they so politically difficult?
- this paper:
  1. rationalizes the "political cost" of reforms and reconciles it with the evidence
  2. new insights on the role of uncertainty (e.g., economic shocks) on the viability of reforms
- no need to refer to distributional conflict

The Political Cost of Reforms: Intuition

- agency model between an office-motivated politician and voters
- key assumptions:
  1. reforms have current costs and future returns
  2. investment in reforms is not directly observable
  3. political ability is *ex-ante* unknown and imperfectly observed (noise)
- implications:
  - politicians underinvest in reforms in an attempt to signal high ability and increase their reelection probability
  - yet, voters anticipate this strategy so that *equilibrium* reforms do not affect reelection prospects

Main Results

1. too little reforms are implemented
2. uncertainty promotes reforms
   - if uncertainty is high, reelection probability depends more on luck, less on policy $\longrightarrow$ more "freedom" to do reforms
3. uncertainty may be welfare-improving
   - more reforms, but worse accountability and selection of politicians
4. some normative applications:
   - desirability of a one-term limit
   - optimal political reward

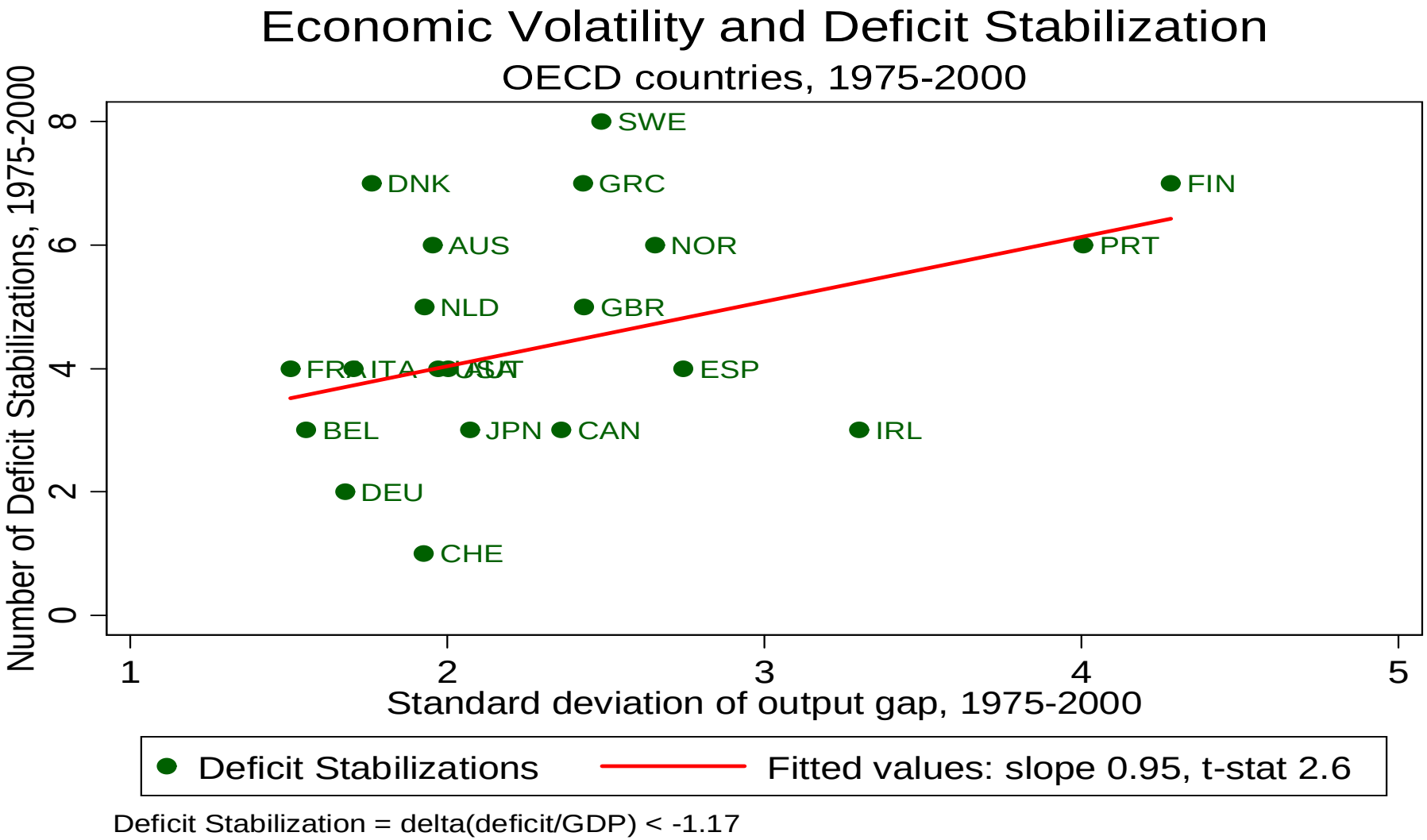
Related Literature

- *electoral accountability and political selection*
  - Barro (1973), Alesina & Tabellini (2007, 2008), Caselli & Morelli (2004), Besley (2004), Mattozzi & Merlo (2008), Ponzetto and Troiano (2012)
- *political business cycle*
  - Nordhaus (1975), Rogoff & Sibert (1988), Rogoff (1990), Drazen (2000)
- *reforms and uncertainty*
  - Alesina & Drazen (1991), Fernandez & Rodrik (1991), Cukierman et al. (1992)
- *information in agency models*
  - Dewatripont at at. (1999), Holmström (1999), Prat (2005)

Motivating Evidence: Crisis, Reforms and Reelection

- *reelection depends positively on economic performance*
  - Fair (1978, 2008), Kiewiet & Rivers (1985), Alesina & Rosenthal (1995), Wolfers (2007), Brender & Drazen (2008), Buti et al. (2010)
- *reelection does NOT depend on reforms*
  - Peltzman (1992), Alesina et al. (1998), Brender & Drazen (2008), Drazen & Eslava (2010), Alesina et al. (2010), Buti et al. (2010)
- *reforms and politicians' time-horizon*
  - Alesina et al. (2006), Conconi et al. (2011): electoral proximity lowers the probability of reforms
- *crises lead to reforms*
  - Alesina & Ardagna (1998), Drazen & Easterly (2001), Alesina et al. (2006), Abiad & Mody (2003), Dang et al. (2006)
- *economic volatility and reforms?*
  - preliminary evidence, 20 OECD countries, 1975-2000: fiscal reforms positively correlated to St.Dev.(output gap)

Graphical Evidence: Deficit Stabilization and Volatility



Model Setting

- two-period citizen-candidate model
- period one:
  - an incumbent politician of unknown ability makes an *effort* choice and invests in *reforms* with a current cost and future returns
  - current economic outcomes materialize
- elections:
  - upon observing economic outcome, citizens may replace the incumbent with a new random draw
  - voters would like too keep good politicians, but only observe a noisy signal of ability
- period two:
  - reforms pay out

Preferences

- expected utility of citizens:

$$W = \mathbb{E}\left[y_t + \beta y_{t+1}\right]$$

  - y_t, y_{t+1} = economic performance
  - β = discount factor

- expected utility of incumbent politician:

$$U = W + \gamma - \frac{a^2}{2} + \beta p \gamma$$

  - γ = reward from office
  - $a^2/2$ = cost of effort a
  - p = perceived reelection probability

Role of Politicians

- economic performance depends on political ability (θ), effort (a) and reforms (r):

$$\begin{aligned} y_t &= \theta_t + \kappa a - r + \varepsilon_t \\ y_{t+1} &= \theta_{t+1} + f(r) + \varepsilon_{t+1} \end{aligned}$$

  - $\theta \sim N\left(\overline{\theta}, \sigma_\theta^2\right)$, persistent and unknown to all
  - $\varepsilon \sim N\left(0, \sigma_\varepsilon^2\right)$ is an i.i.d. shock
  - $f' > 0$, $f'' < 0$, $\lim_{r \to 0} f' = \infty$

- voters want to keep good politicians

Optimal Voting Rule

- voters' information:
  - know $\overline{\theta}$, σ_θ^2, σ_ε^2 and observe y_t
  - have rational expectations on reforms and effort, r^e and a^e
  - given y_t, form posterior belief on political ability

$$\widehat{\theta}_t = \mathbb{E}\left[\theta \mid y_t\right] = \frac{\sigma_\varepsilon^2}{\sigma_\theta^2 + \sigma_\varepsilon^2}\overline{\theta} + \frac{\sigma_\theta^2}{\sigma_\theta^2 + \sigma_\varepsilon^2}\left(y_t - \kappa a^e + r^e\right)$$

- optimal voting rule:
  - reelect the incumbent if $\widehat{\theta}_t \geq \overline{\theta}$, i.e. if $y_t \geq \overline{y} = \overline{\theta} + \kappa a^e - r^e$

Incumbent Politician

- chooses r and a so as to solve:

$$\max_{r,a}\left\{\mathbb{E}\theta_t - r + \kappa a - \frac{a^2}{2} + \gamma + \beta\left[\mathbb{E}\theta_{t+1} + f\left(r\right) + p\gamma\right]\right\}$$

$$s.t.: p = \Pr\left(y_t \geq \overline{y}\right) = \Pr\left(\theta + \varepsilon_t + \kappa a - r \geq \overline{y}\right)$$

- FOC for reforms:

$$\beta f'\left(r\right) = 1 - \beta\gamma\frac{\partial p}{\partial r}$$

  - $-\beta\gamma\partial p/\partial r = \beta g\left(\overline{y} + r - \kappa a\right) > 0$: "political cost" of reforms

- FOC for effort:

$$a = \kappa + \beta\gamma\frac{\partial p}{\partial a}$$

  - $\beta\gamma\partial p/\partial a = \beta\kappa g\left(\overline{y} + r - \kappa a\right) > 0$: "disciplining" role of elections
  - $g =$ density of $\theta + \varepsilon_t$

Equilibrium: Reforms and Uncertainty

- rational expectations ($r = r^e$ and $a = a^e$):

$$-\frac{\partial p}{\partial r} = g\left(\overline{\theta}\right) \equiv \overline{g} = \left[2\pi(\sigma_\theta^2 + \sigma_\varepsilon^2)\right]^{-1/2}$$

- reforms and effort solve:

$$\beta f'\left(r\right) = 1 + \beta \overline{g} \gamma \quad \text{and} \quad a = \kappa\left(1 + \beta \overline{g} \gamma\right)$$

- comparative statics:

$$\begin{array}{lllll} \dfrac{\partial r}{\partial \sigma_\varepsilon^2} & > & 0; & \dfrac{\partial r}{\partial \sigma_\theta^2} > 0; & \dfrac{\partial r}{\partial \gamma} < 0 \\ \dfrac{\partial a}{\partial \sigma_\varepsilon^2} & < & 0; & \dfrac{\partial a}{\partial \sigma_\theta^2} < 0; & \dfrac{\partial a}{\partial \gamma} > 0 \end{array}$$

- by making p less sensitive to r, *higher uncertainty reduces the political cost of reforms*

Equilibrium: Reelection and Political Selection

- imposing $r = r^e$ and $a = a^e$, reelection probability

$$p = \frac{1}{2}$$

independent of the reform choice

- benefit of selection:
  - reelected politicians tend to have high ability

$$\mathbb{E}\theta_{t+1} = \overline{\theta} + \frac{\delta}{2}, \quad \text{with} \quad \delta = \frac{\sigma_\theta^2}{\sqrt{\pi(\sigma_\varepsilon^2 + \sigma_\theta^2)}}$$

  - $\delta =$ "selection premium" increases with heterogeneity, decreases with noise

Uncertainty and Welfare

- more heterogeneity ($\sigma_\theta^2 \uparrow$):
  - more reforms ($r \uparrow$) + better selection ($\delta \uparrow$) + less effort ($a \downarrow$)

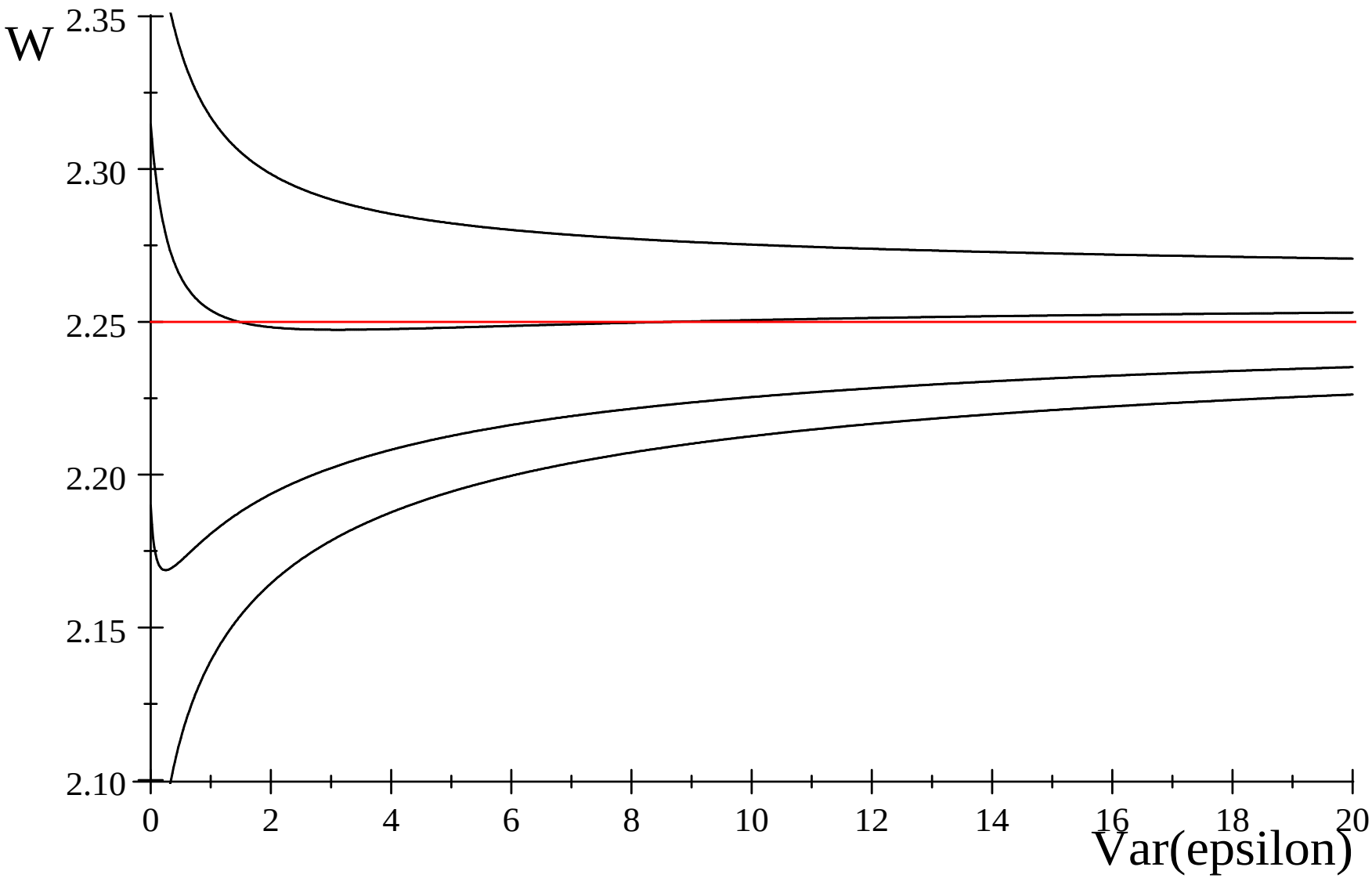
$$\frac{\partial W}{\partial \sigma_\theta^2} > 0 \Longleftrightarrow \sigma_\theta^2 + 2\sigma_\varepsilon^2 - \frac{\gamma^2 \overline{g}}{f''(r)} > \kappa^2 \gamma$$

- higher noise ($\sigma_\varepsilon^2 \uparrow$):
  - more reforms ($r \uparrow$) + worse selection ($\delta \downarrow$) + less effort ($a \downarrow$)

$$\frac{\partial W}{\partial \sigma_\varepsilon^2} > 0 \Longleftrightarrow -\frac{\overline{g}\gamma^2}{f''(r)} > \sigma_\theta^2 + \kappa^2 \gamma$$

- *uncertainty may be welfare-improving when reforms are important*

Uncertainty and Welfare: Examples



Political Reward and Welfare

- political compensation (γ) has contrasting effects on social welfare:
  - it induces more effort ($W \uparrow$)
  - but less reforms ($W \downarrow$)
- under mild conditions, there is an interior optimal level of political reward:

$$\gamma^* = \frac{-\kappa^2 f''(r)}{\overline{g}}$$

- comparative statics:

$$\frac{\partial \gamma^*}{\partial \sigma_\varepsilon^2} > 0; \quad \frac{\partial \gamma^*}{\partial \sigma_\theta^2} > 0; \quad \frac{\partial \gamma^*}{\partial \kappa} > 0$$

1. more uncertainty $\longrightarrow$ less severe underinvestment in r $\longrightarrow$ higher γ^*
2. higher value of effort, κ, $\longrightarrow$ higher γ^*

Term Limit and Welfare

- imposing *ex-ante* $p = 0$ has costs and benefits
  1. removes the political cost of reforms restoring the optimal investment, $r \longrightarrow r^{FB}$
  2. gives up the benefit of selection (δ) and reduces effort (a)
- a one-term limit is socially optimal for:
  1. low heterogeneity in ability
  2. intermediate levels of noise

Some Extensions

- if reforms are discrete, $r \in \{0, R\}$, with $f(r)$ stochastic and observable:
  1. too few reforms are implemented
  2. bigger reforms (high R) are harder to implement
- if the cost of reforms is stochastic and known to the politician only:
  1. positive correlation between p and r in equilibrium

Conclusions

- we have shown how:
  1. governments perceive a political cost of reforms even if reforms are not punished by voters
  2. uncertainty makes reform more politically viable
  3. the political cost of reforms depends on political rewards and term limits
- limitations/extensions:
  1. repeated game? richer dynamics
  2. some reforms may affect uncertainty
  3. add redistributional conflict
  4. test more predictions of the theory

Extensive Margin of Reforms: Cross Section

Table 1. Economic Volatility and the Number of Reforms
OECD Countries, 1975-2000 - Cross Section

SD	0.946**	1.023**	0.930***	0.929**	0.993***	0.814**
	[0.371]	[0.455]	[0.332]	[0.384]	[0.334]	[0.332]
log(GDP_75)		0.453				
		[2.386]				
DEFICIT			-0.022		0.158	
			[0.163]		[0.140]	
#_CRISIS_DEF				0.022	0.084	0.091
				[0.071]	[0.098]	[0.071]
#_left						0.139**
						[0.063]
#_younggov						-0.136
						[0.063]
parliamentary						-0.162
						[0.694]
R-squared	0.148	0.150	0.149	0.153	0.216	0.489
Observations	20	20	20	20	20	20

Extensive Margin of Reforms: Logit + FE

Table 2. Economic Volatility and the Likelihood of Reforms
OECD Countries, 1975-2000 - Panel

SD_1	0.290*	0.320**	0.346**	0.260***	0.348***	0.320**
	[0.159]	[0.163]	[0.164]	[0.070]	[0.161]	[0.164]
DEFICIT_1	0.153***	0.114**	0.231***	0.300*	0.317***	0.321***
	[0.047]	[0.052]	[0.058]	[0.157]	[0.076]	[0.078]
OUTPUTGAP_1		0.093				
		[0.060]				
log(GDP_1)			-4.288***		-3.934***	-3.925***
			[1.471]		[1.480]	[1.510]
CRISIS_DEF_1				1.502**	1.502**	1.270*
				[0.675]	[0.675]	[0.693]
election_1						-0.238
						[0.334]
left_1						-0.330
						[0.364]
younggov_1						-0.511
						[0.372]
Observations	342	342	342	342	342	342
Countries	19	19	19	19	19	19
Country-FE	Yes	Yes	Yes	Yes	Yes	Yes

Intensive Margin of Reforms: Panel + FE

Table 3. Economic Volatility and Reforms
OECD Countries, 1975-2000 - Panel LSDV

SD_1	-0.332**	-0.344**	-0.352**	-0.351**	-0.369***	-0.334**
	[0.148]	[0.152]	[0.146]	[0.148]	[0.145]	[0.149]
DEFICIT_1	0.843***	0.852***	0.775***	0.725***	0.682***	0.687***
	[0.047]	[0.047]	[0.047]	[0.047]	[0.047]	[0.047]
OUTPUTGAP_1		-0.024				
		[0.048]				
log(GDP_1)			0.0001***		0.0001***	0.0001***
			[0.00005]		[0.00005]	[0.00005]
CRISIS_DEF_1				-1.317***	-1.151***	-1.099***
				[0.434]	[0.428]	[0.431]
election_1						0.269
						[0.263]
left_1						0.353
						[0.286]
younggov_1						0.518*
						[0.290]
R-squared	0.743	0.745	0.732	0.743	0.739	0.742
Observations	346	346	346	346	346	346
Countries	20	20	20	20	20	20