On Line Appendix

Employee Representation Legislations and Innovation

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[non intended for publication]

1 Privately optimal levels of financial and working effort

Prohibitively costly firing ($\chi > \varrho(\eta_w^{**}(\frac{1}{2}\tilde{\Psi}), \varphi_s^{\delta}(\tilde{\Psi})) \cdot \Psi - \varphi_s^{\delta}(\tilde{\Psi}) - \omega_w - \pi_s^{JM}$).

Shareholder-management case. While the worker has no incentive to exert any additional effort above $\underline{\eta}_w$, the shareholder acts in order to solve problem (1) [notation of the paper]. Profit maximizing financial effort will satisfy:

$$\varrho'(\underline{\eta}_w, \varphi_s^*(\tilde{\Psi})) = \frac{1}{\tilde{\Psi}} \tag{1}$$

Joint-management case. In this case, the worker will solve problem (4) [notation of the paper]. His privately optimal level of working effort will satisfy:

$$\varrho'(\eta_w^{**}(\frac{1}{2}\tilde{\Psi}), \varphi_s(\frac{1}{2}\tilde{\Psi})) = \frac{2}{\tilde{\Psi}} \tag{2}$$

The shareholder, on the other hand, will solve problem (6) [notation of the paper] and choose the financial effort level satisfying:

$$\varrho'(\eta_w(\frac{1}{2}\tilde{\Psi}), \varphi_s^{**}(\frac{1}{2}\tilde{\Psi})) = \frac{2}{\tilde{\Psi}} \tag{3}$$

Costless firing ($\chi < \varrho(\eta_w^{**}(\frac{1}{2}\tilde{\Psi}), \varphi_s^{\delta}(\tilde{\Psi})) \cdot \Psi - \varphi_s^{\delta}(\tilde{\Psi}) - \omega_w - \pi_s^{JM}$).

Whatever the level of α, the worker chooses $\underline{\eta}_w$, while the shareholder will solve problem (1) [notation of the paper], choosing the financial effort level which will satisfy:

$$\varrho'(\underline{\eta}_w, \varphi_s^*(\tilde{\Psi})) = \frac{1}{\tilde{\Psi}} \tag{4}$$

2 Socially optimal levels of financial and working effort

The socially optimal levels of financial effort ($\varphi_s^\star$) and working effort ($\eta_w^\star$) are obtained by solving:

$$\max_{\eta_w,\varphi_s} \quad \varrho(\eta_w(\alpha,\tilde{\Psi}),\varphi_s(\alpha,\tilde{\Psi}))\cdot\tilde{\Psi}\cdot(1-\alpha)+\varrho(\eta_w(\alpha,\tilde{\Psi}),\varphi_s(\alpha,\tilde{\Psi}))\cdot\tilde{\Psi}\cdot\alpha-\varphi_s(\alpha,\tilde{\Psi})-\eta_w(\alpha,\tilde{\Psi}) \quad (5)$$

i.e.:

$$\varrho'(\eta_w^\star(\alpha,\tilde{\Psi}),\varphi_s(\alpha,\tilde{\Psi}))=\varrho'(\eta_w(\alpha,\tilde{\Psi}),\varphi_s^\star(\alpha,\tilde{\Psi}))=1 \quad (6)$$