The current study analyses different managerial styles and firm adjustment to an energy crisis. It provides evidence for the link between productivity differentials during turbulent times and firm management practices.

Previous studies (Financial and Health) crises (Alfaro & Chen, 2012; Aghion et al., 2021; Englmaier et al., 2020; Collings et al., 2021; Bradley et al., 2011; Chatzopoulu et al., 2022); however, to the best of my knowledge, no thorough study in energy crisis.

**Table 1. Top four negative and positive loadings:** Higher value describes a management style closer to PLS type

\[
\text{Ln}Y_{i,j,t} = \beta_0 + \theta_1(\text{PLS\_MANAGE} \times \text{CRISIS})_i + \omega_{i,j,t} + 
\eta_{i,t} + \xi_{i,j,t} (1)
\]

- \(\text{Ln}Y_{i,j,t}\): Firms’ gross profit margin
- \(\text{PLS\_MANAGE}\): Dummy equals 1 if PLS (higher than median \(\rightarrow\) PLS)
- \(\text{CRISIS}\): A dummy equals 1 if year 2000-2001 (Observation period: 1994-2001[2002])
- \(\omega_{i,j,t}\): Controls: firms founding year, size, capital expenditure
- \(\eta_{i,t}\): Firm fixed effect
- \(\xi_{i,j,t}\): Error term clustered in county and industry level
- \(\theta\): Coefficient of interest

Relative outcomes of firms in California under different managerial styles before/after the energy crisis

**Main Outcome and Mechanism**

FCL management style performed better than PLS during the energy crisis by incurring less COGS

**Conclusion**

- A good management style requires a flexible input composition, allowing firms to achieve equi-
  finality in terms of their production
- A good manager is one who comprehends the marginal rate of technical substitution between
  their inputs and adjust their production function
- A good robotization may play a significant role in enhancing firm performance especially during
  a situation with limited resources

**References**


