The Fine Line Between Regulatory Independence And Protection Of Investor Rights

VIEW OF PARETO EFFICIENCY

PRESENTED TO
Energy Community

PRESENTED BY
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Agenda

Stability vs Adaptability

Pareto Efficiency
  - Concept
  - Application to Policy Decisions

Conclusions
Stability vs Adaptability

Can be attractive for state to give long-term commitments:

- Energy infrastructure often long lived
- Capital intensive/Large up-front investments
- Benefit: Stability for investors
  - Lower risk = lower return = lower end-user prices

Regulatory intervention should be:

- Independent
- In the best interest of system
- Benefit: Adaptability to changing conditions

Q: Can competing interests be reconciled?
Pareto Efficiency

Pareto was an engineer and economist who studied efficient resource allocation.

Efficiency means gain to "winners" exceed losses to "losers"
- Any efficient change must have scope to compensate
  - "Winners" compensate "losers"

"Pareto Improvement" is a change in which:
- At least one party is better off
- No party is worse off
A signed contract for delivery of widgets to B

- Contract worth 100 to A, 20 to B

C urgently requires widgets

- willing to pay 130 to A;
- A cannot satisfy both parties.

What should A do?
Pareto Efficiency
Example: Efficient Breach

#1: Original Contract

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th></th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total: 120

#2: A Breaks Contract

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<th>Value</th>
<th>Change</th>
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<tr>
<td>A</td>
<td>130</td>
<td>+30</td>
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<tr>
<td>B</td>
<td>0</td>
<td>-20</td>
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</table>

#3: A Breaks Contract, pays compensation to B

<table>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>110</td>
<td>+10</td>
</tr>
<tr>
<td>B</td>
<td>20</td>
<td>0</td>
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</tbody>
</table>

Total: 130

Breach beneficial to society overall

A incentivised to change
What if C can only offer 105 to A?

<table>
<thead>
<tr>
<th>#1: Original Contract</th>
<th>#2: A Breaks Contract</th>
<th>#3: A Breaks Contract, pays compensation to B</th>
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<tbody>
<tr>
<td></td>
<td>Value</td>
<td>Change</td>
</tr>
<tr>
<td>A</td>
<td>100</td>
<td></td>
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<tr>
<td>B</td>
<td>20</td>
<td></td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>120</strong></td>
<td></td>
</tr>
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</table>

Breach **not** beneficial to society overall

A incentivised to change only when compensation not paid
Pareto Efficiency in Policy

Same principles apply to Regulatory intervention
- Regulators will find it attractive to “breach contract” if it represents gain to system as a whole

Payment of compensation does not make any efficient policy change unattractive
- If change represents net gain, benefits must be sufficient to compensate losers

Compensation only disincentivises inefficient policy choices
Pareto Efficiency in Policy
Example: Nuclear Power

Economic view: Switch in technology efficient when present value (PV) of cost of new technology is less than PV of future operating costs of nuclear

\[
\text{PV Cost}_{\text{New Tech}} < \text{PV Opex}_{\text{Nuclear}}
\]

Regulatory view to switch when:

Cost of Ending Support < Cost of Continuing Support

\[
\text{Compensation} + \text{PV Cost}_{\text{New Tech}} < \text{PV Tariff}_{\text{Nuclear}}
\]

\[
\text{PV Cash Flows}_{\text{Nuclear}} + \text{PV Cost}_{\text{New Tech}} < \text{PV Tariff}_{\text{Nuclear}}
\]

\[
(\text{PV Tariff}_{\text{Nuclear}} - \text{PV Opex}_{\text{Nuclear}}) + \text{PV Cost}_{\text{New Tech}} < \text{PV Tariff}_{\text{Nuclear}}
\]

\[
\text{PV Cost}_{\text{New Tech}} < \text{PV Opex}_{\text{Nuclear}}
\]

Compensation aligns incentives
Arbitration seeks to understand what commitments were made

- What was risk allocation at outset, e.g.:
  - Which party bears technology risk
  - Which party bears interest rate risk
- Often: were such commitments reasonable

Not necessary to measure efficiency of breach for damages quantification

- State bears gain/loss of policy change

Sovereign rights infringed only on mistaken finding of fact about nature of initial commitment
Conclusions

State sovereignty includes ability to make commitments
   − Ignoring prior commitments actually undermines sovereignty

Requirement for compensation does not necessarily mean Regulator acted inappropriately or in bad faith
   − Not a fine (tort), but recognition of earlier commitment

As long as compensation is not punitive, it will not make any future efficient policy choice unattractive
   − Only inefficient choices unattractive

Q: Can competing interests be reconciled?
   − A: Yes: and compensation (in some form) is key
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