# Economics of International Investment Agreements

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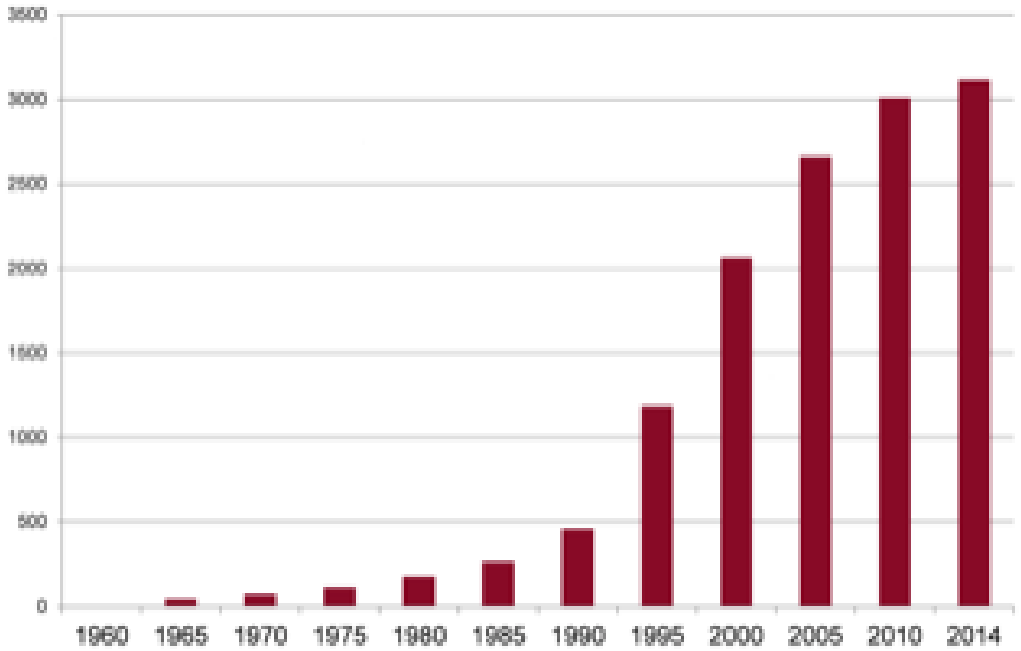
# International investment agreements

- State-to-state treaties that aim to **promote foreign investment**
- In particular: protect investors against consequences of **direct and regulatory expropriation**
- Host country **compensates** expropriated firms for their losses
- **Investor-state dispute settlement** through international arbitration tribunals
- **Insurance property** strengthens investment incentives
- **Damage payments** discipline host countries

# The evolution of international investment protection

First agreement in the 1950s



# Heated policy debate

- Number of controversial litigation cases (e.g. Philip Morris vs Australia)
- Strong public resistance to investment protection in CETA, TTIP, TPP, NAFTA
- Investment protection allegedly causes **regulatory chill:**

  *..."we have had situations where real regulation which should be in place, which is bipartisan and in everybody's interest, has not been put in place for fears of ISDS." US Trade Representative Robert Lighthizer, March 21, 2018*

- Agreements increasingly often specify exceptions from compensation payments: **carve-outs**
- Such exceptions occur for "legitimate" policy interventions

# Research questions

- Are investment agreements (as currently designed) capable of solving the distortions they were meant to address?
- Is there a trade-off between investment protection and host country freedom to regulate?
- Do agreements cause regulatory chill?
- Who gain and who lose from investment agreements?
- Why are some of them so controversial?
- How do compensation rules for expropriation interact with other key stipulations of agreements?
- **Very little economic research has been done on investment agreements**
- **Analyze efficiency and distribution properties of investment agreements in a unified theoretical framework**

# Structure

- **Stage 0:** Home and Foreign sign an agreement that establishes compensation rule $T$ for regulation of investments undertaken by Foreign firm in Home
- **Stage 1:** Foreign firm decides how much capital $k$ to invest in Home at total cost $R(k)$
- **Stage 2:** After the investment is sunk, Home observes a shock $\theta \in [\underline{\theta}, \bar{\theta}]$ and decides whether to allow production or to regulate the Foreign firm
- If decision is "Production":
  - Home utility: $V(k, \theta)$, $V_\theta < 0$
  - Investor operating profit: $\Pi(k) > 0$
- If decision is "Regulation":
  - Home utility: $-T(k, \theta)$
  - Investor compensation: $T(k, \theta) \geq 0$
- Solve the game by backward induction

# (Subgame-perfect) Equilibrium of market game

**Stage 2: Regulation**

- Host country allows production for all shocks

$$\theta \in M(k,T) = \{\theta' : V(k,\theta') \geq -T(k,\theta')\}$$

- Regulate otherwise

**Stage 1: Investment and expected surplus**

- The investor expected profit

$$\tilde{\Pi}(T) = \max_{k' \geq 0} [\int_{\theta \in M(k',T)} dF(\theta)\Pi(k') + \int_{\theta \notin M(k',T)} T(k',\theta)dF(\theta) - R(k')]$$

- Home expected utility

$$\tilde{V}(T) = \int_{\theta \in M(k(T),T)} V(k(T),\theta)dF(\theta) - \int_{\theta \notin M(k(T),T)} T(k(T),\theta)dF(\theta)$$

## Stage 0 Negotiating an investment agreement

- Any agreement $T$ that maximizes **joint surplus**

$$\omega(T) = \int_{\theta \in M(k(T),T)} [V(k(T),\theta) + \Pi(k(T))] dF(\theta) - R(k(T))$$

implements investment $k^J$ and threshold for regulation $\theta^J$ that solve:

$$k^J \in \arg\max_{k \geq 0} \{ \int_{\underline{\theta}}^{\theta^J} [V(k,\theta) + \Pi(k)] dF(\theta) - R(k) \}$$

$$V(k^J, \theta^J) + \Pi(k^J) = 0$$

- Assume that $T$ maximizes the **Nash product**

$$\mathcal{N}(T) = [\tilde{V}(T) - v^0]^{\alpha} [\tilde{\Pi}(T) - \pi^0]^{1-\alpha}$$

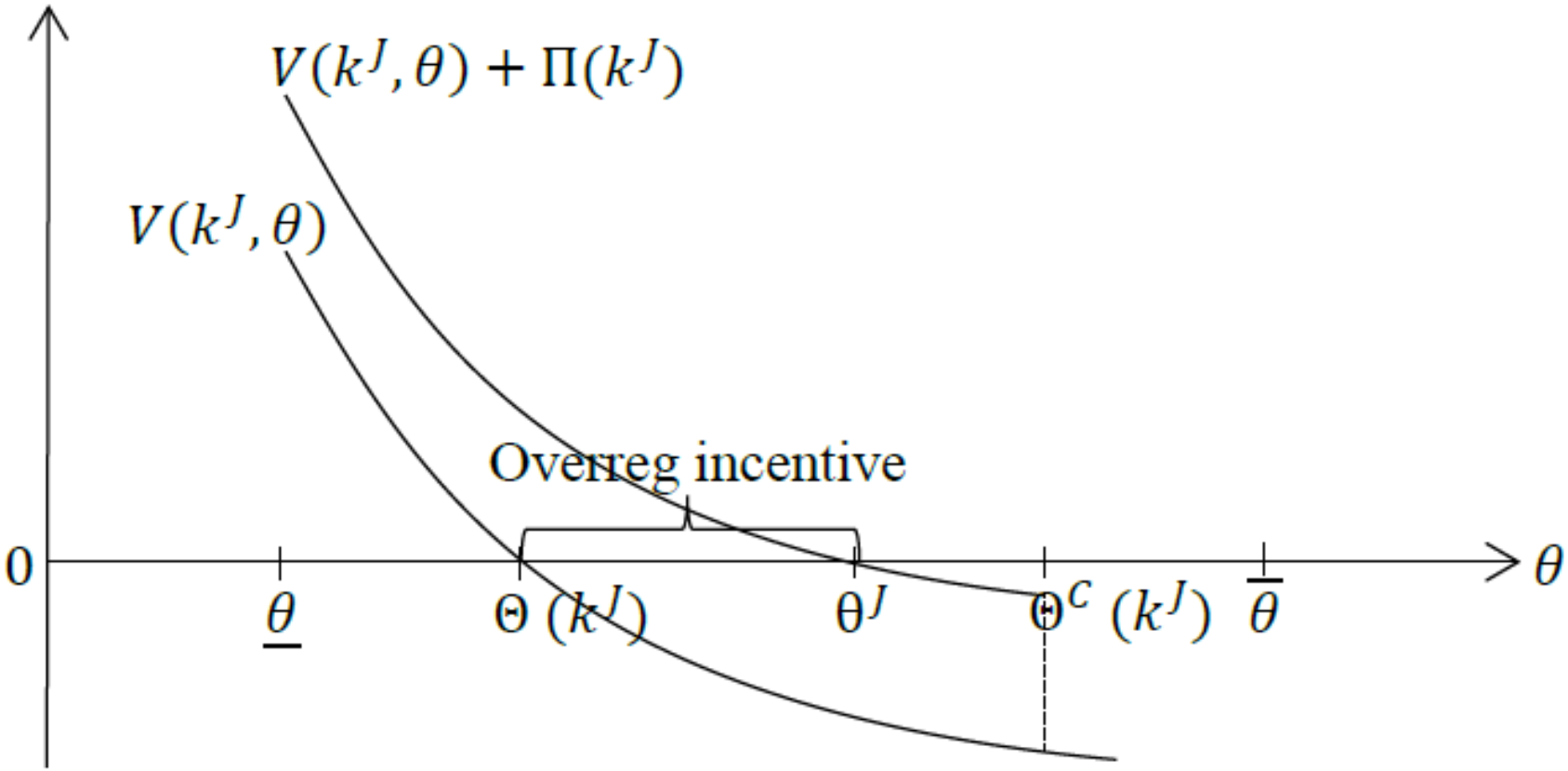
# Optimal investment agreement

## Proposition

*Home and Foreign will, under a robust set of circumstances, negotiate a compensation scheme* $T^C$ *that implements the jointly efficient outcome* $(k^J, \theta^J)$ *and has the following characteristics:*

$$T^C(k,\theta) = \begin{cases} \Pi(k) & \text{if } \theta \leq \Theta^C(k) \\ 0 & \text{if } \theta > \Theta^C(k) \end{cases}$$

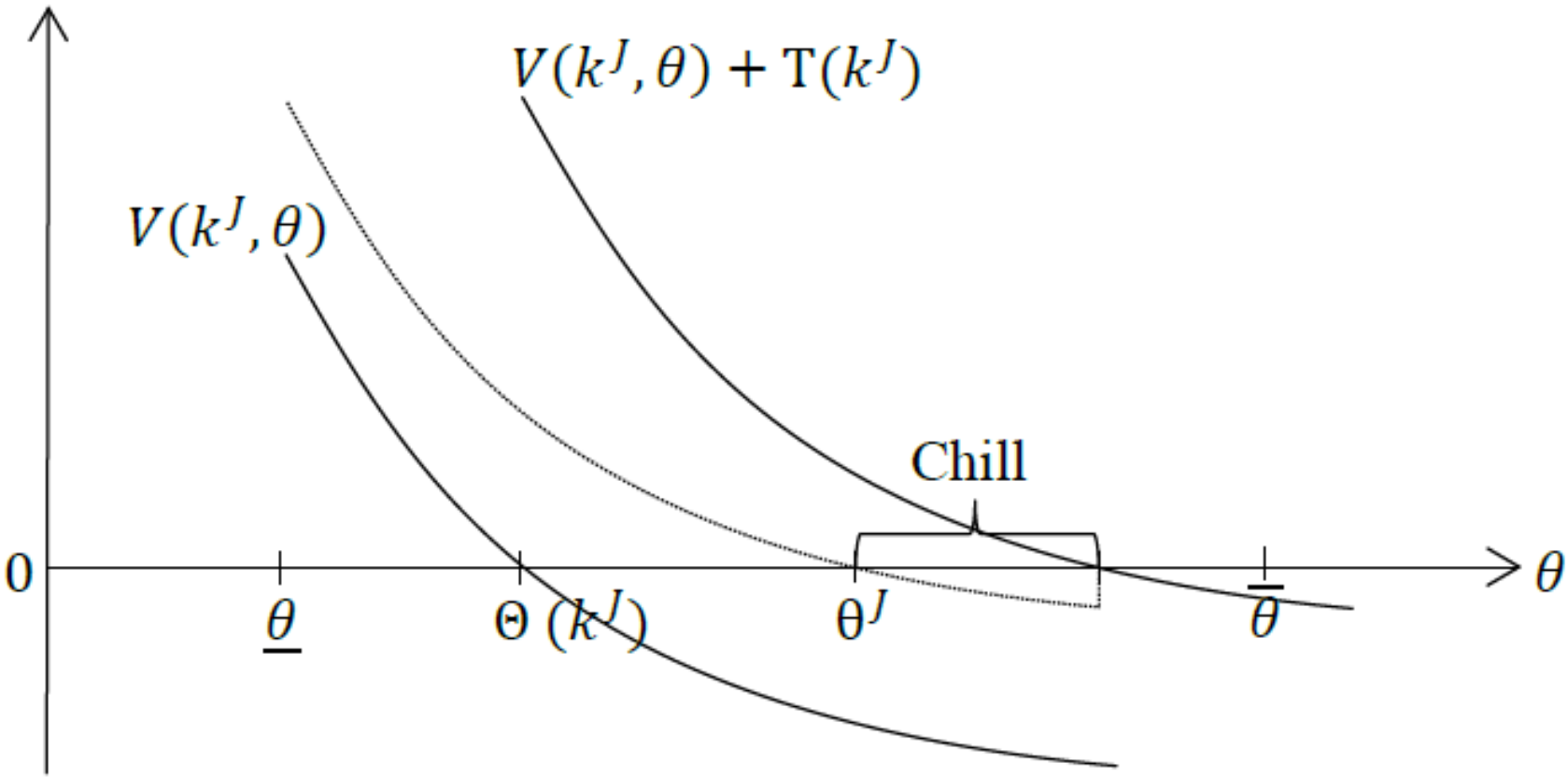
# Carve-out compensation can achieve three goals in one



# The optimality of carve-out compensation

- Provides an economic foundation for **all-or-nothing compensation** principle found in international investment agreements
- Compensation should be set equal to **foregone operating profit**
  - "the value of the return the investor would have obtained from the investment if it had not been nationalized or expropriated"
- **Regulatory expropriation** occurs if host country regulates for $\theta \leq \Theta^C(k)$
- Regulation for all $\theta > \Theta^C(k)$ constitutes **legitimate policy intervention**

# Do agreements cause regulatory chill?



# Investment agreement as a credible instrument to increase investment protection

- The agreement $T^U$ that maximizes host country utility yields: $v^U = \max_T \tilde{V}(T)$
- The expected investment profit: $\pi^U = \tilde{\Pi}(T^U)$
- If the host country can implement $T^U$, no incentive to enter into an investment agreement because $\tilde{V}(T) \leq v^U$
- **The incentive for countries to enter into investment agreements under one-way investment flows stems from the access to credible institutions for dispute settlement**

# Exchanging increased investment protection through investment agreements

- Assume that investments flow in both directions
- The agreement is a pair of compensation functions: $(T, T^*)$
- **Two industrialized countries that can unilaterally commit to investment protection can nevertheless benefit from an agreement to jointly increase investment protection**
- The Host country net utility of entering into an agreement

$$\tilde{V}(T) + \Pi^*(T^*) - v^U - \pi^{*U} > 0$$

- **Investors benefit at the expense of the rest of society**

$$\Pi^*(T^*) - \pi^{*U} > v^U - \tilde{V}(T)$$

- "Under the TPP ISDS provisions, Australian investors have more to gain than the Australian Government and the Australian people have to lose." (report to the Parliament of Australia, 2016)

# Concluding remarks

- We analyze efficiency properties and distribution effects of international investment agreements in a unified model
- Simple carve-out schemes similar to those found in actual agreements are optimal in a wide variety of settings
  - host country has distorted incentives to regulate
  - investments are distorted because of host country and industry externalities
  - surplus division important in agreements
- Agreements do not cause global regulatory chill
- Agreements meant to increase one-way trade-flows (North-South) solve domestic commitment problems to the benefit of foreign investors and host country
- Agreements meant to increase two-way trade-flows (North-North) solve Prisoners' Dilemma problems to the benefit of foreign investors, but at the loss of rest of society
- Economic rationale for criticism of investment protection in international agreements

# The End

# Small, but emerging literature on investment agreements

- Do investment agreements stimulate investment? (Markusen, '98, '01; Bergstrand and Egger, '13; Falvey and Foster-McGregor, '15)
- First-best efficient compensation mechanisms (Blume, Rubinfeld and Shapiro, '84; Miceli and Segerson, '94; Hermalin, '95; Aisbett, Karp and McAusland, '10a,b; Stähler, '16)
- Specific design features of investment agreements (Kohler and Stähler, '16; Ossa, Staiger and Sykes, '19)
- Regulatory chill (Janeba, '19)
- Distribution effects (Schjelderup and Stähler, '16; Konrad, '17)

Sharp contrast to the abundance of papers on trade agreements