Institutional Complementarities between Organizational Architecture and Corporate Governance

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The Shareholder-sovereignty vs. Stakeholder-society?

- We need a unified conceptual and analytical framework for dealing with both.
  - When and under what condition are they likely to emerge and sustained?
- A third alternative? Because of IT, agents can make wise decisions on the basis of increasing information.
  - How? De-integration (Hart)?

A Comparative institutional Analytic Approach to CG

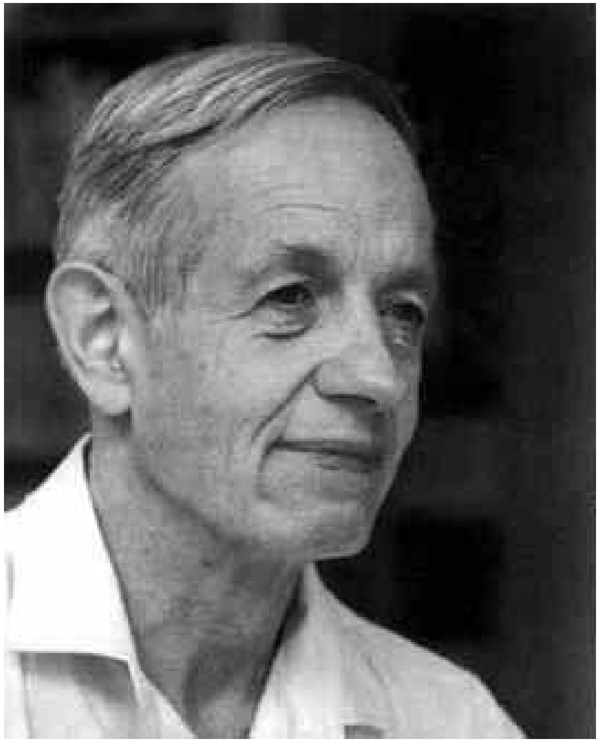
- We consider a variety of Corporate Governance (CG) institutions as multiple equilibria that link games in the domain of organizational architecture and other domains of game (e.g., financial market, labor market, polity).
- We consider three generic modes of organizational architecture: hierarchical decomposition, information sharing, information encapsulation.

What are institutions?

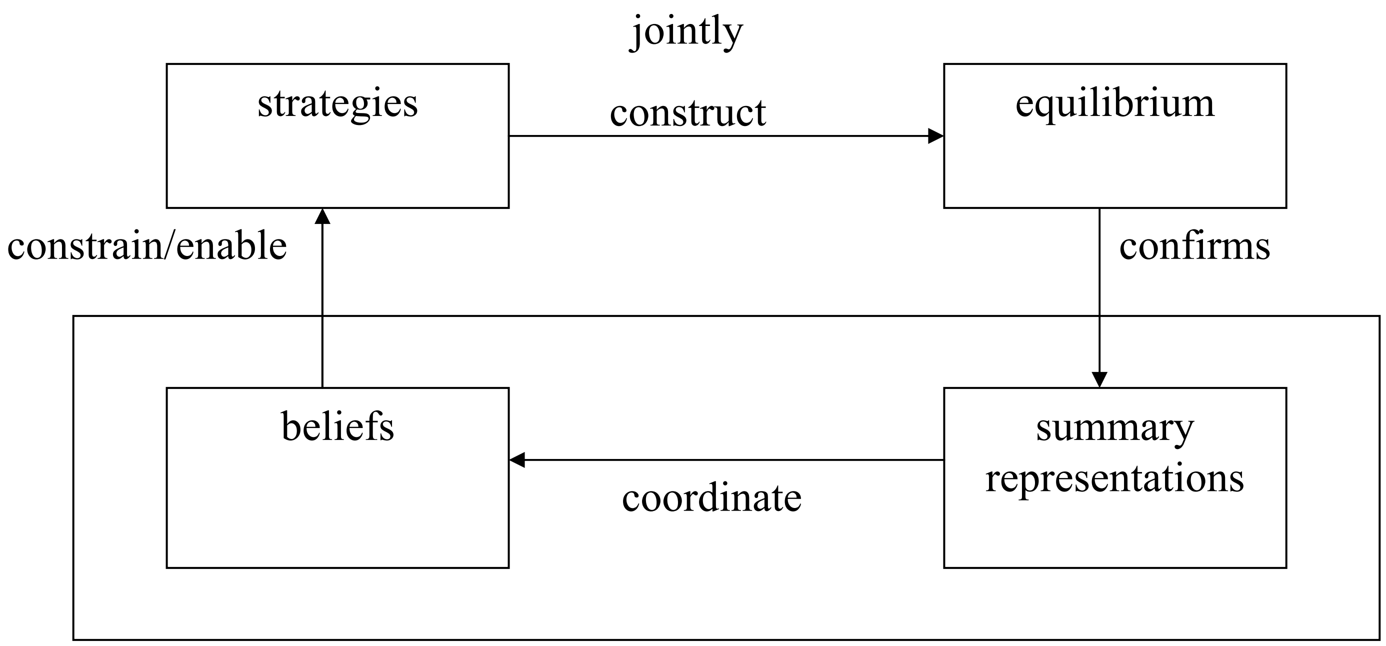
- Institutions are shared beliefs about ways the social game is being played = endogenous, self-enforcing rules of the game, as distinct from formal rules of the game. (Cf. M. Aoki, *Towards a Comparative Institutional Analysis (TCIA),* MIT Press, 2001)
- How can expectations become shared, self-enforceable, and sustainable?

Nash Equilibrium

Institutions (endogenous rules of the game) are summary representations of (Nash) equilibrium of the game.



An institution: shared beliefs cum *summary representation of equilibrium*



Corporate Governance as an Institution

- Game-theoretic setting: the manager, investors, and workers as strategic players.
- CG is ***a set of self-enforcing rules (formal or informal) that regulates action choices of those players contingent on evolving states***.
- In particular, managers' beliefs regarding possible actions of other players in critical contingencies (subgame), such as corporate financial crisis, constrain his or her action ex ante.

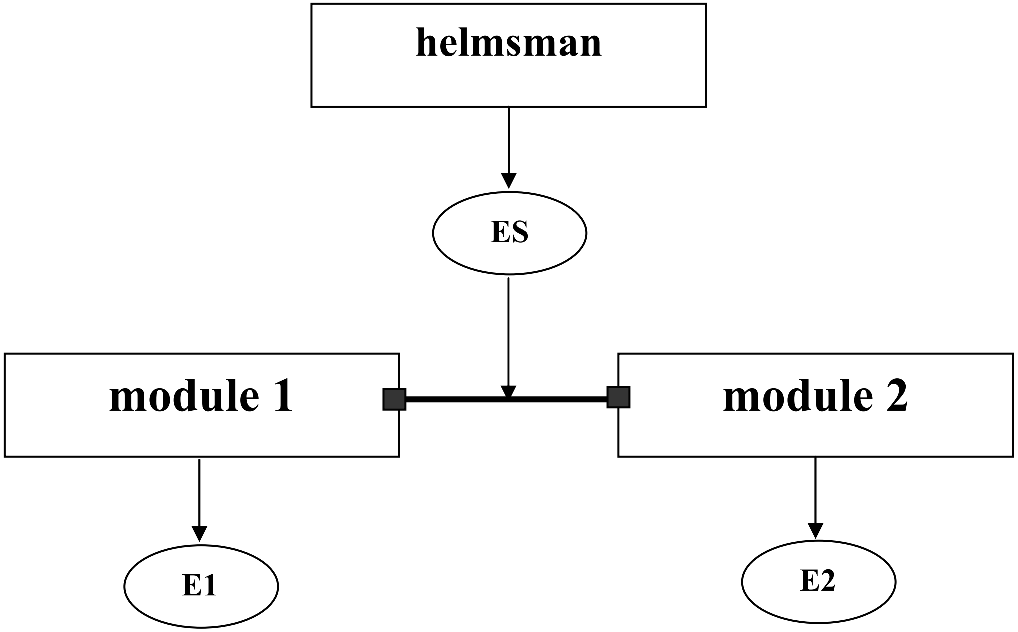
Merits of CIA Approach

- Institutions cannot be arbitrary designed.
- Institutional linkages (linked games) between the organizational domain and financial markets, as well as institutional constraints from labor markets and polity (institutional complementarities). Institutions are robust.
- Multiple equilibria => History matters. Law and policy may constitute a focal point in the selection of an equilibrium.

Three generic types of modularity

- First, let us identify three basic modes of organizational architecture in terms of information connectedness between the helmsman and two module information processors.
- They can be evolutionary equilibria in the organizational field. *TCIA*, Ch. 5.

Hierarchical Decomposition (IBM360)

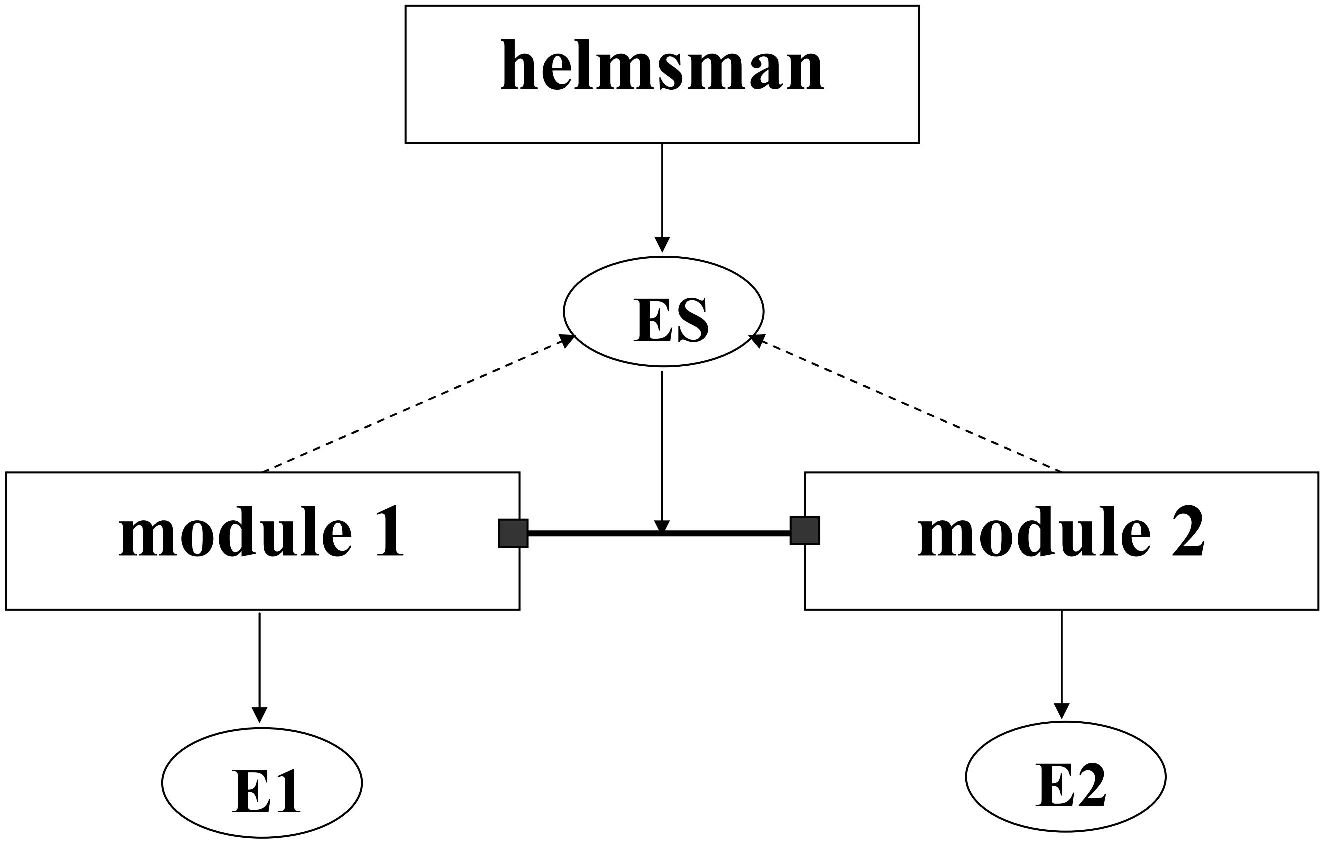


ES : systemic information or “visible” information

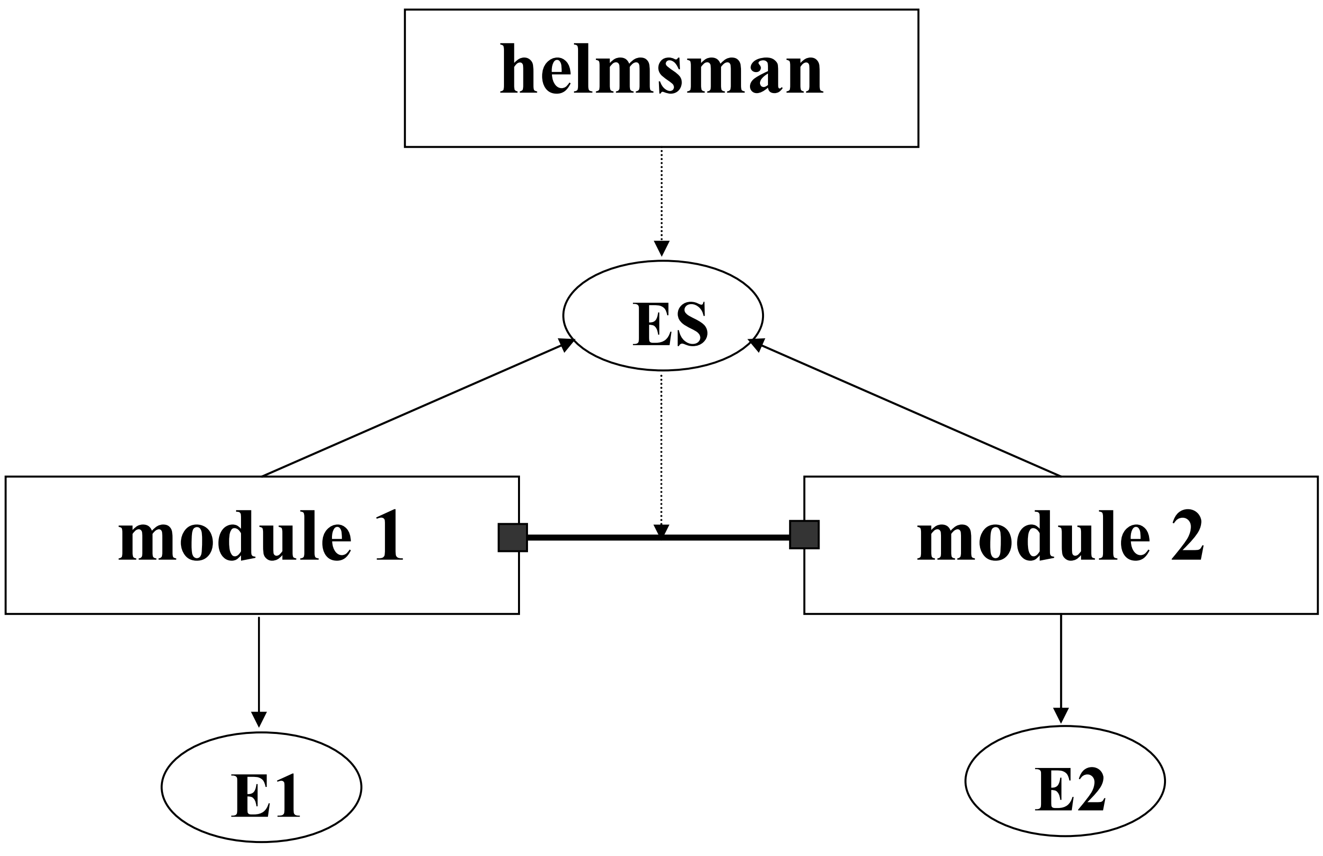
E1 E2 : idiosyncratic information or “hidden” information

: interface rule

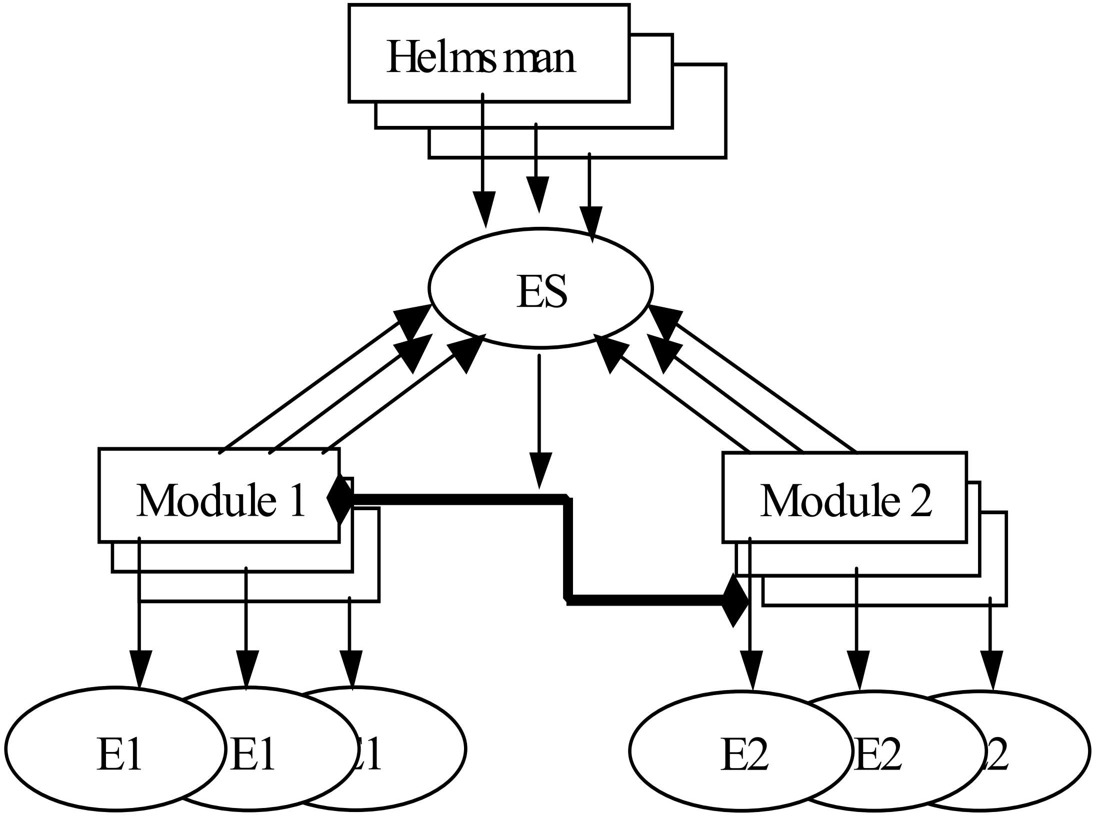
Information-Sharing (Toyota)



Information-Encapsulation



Silicon Valley Clustering



Comparative Informational Efficiency

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Product attribute complementarity	Technological correlation		
	low		high
high	encapsulation	sharing	hierarchical decomposition
low	encapsulation		

The Hartian Premises

- Hierarchical decomposition:The entrepreneur's (helmsman's) skill is "essential" because the worker cannot be productive without her hierarchical coordination, even if he owns all physical assets.
- Information sharing: both manager's skill and workers' skills become "essential" ("team production" in the sense of Holmstrom).
- Information encapsulation: independent development effort under a modicum of information-sharing as embodied in ex ante set interface standards. Should property rights be decentrally owned? (Hart, pp.53-4, Brynjolfson)

The Hartian Property-Rights Solution is only a Special Case

- Entrepreneurial skill is essential. "It is then optimal for the entrepreneur to own the physical assets". Entrepreneurial ownership is complementary to hierarchical organizational control.
- If the entrepreneur is cash constrained, she needs to become the agent of the stockholders. Augment the Tirole's 2001 *Econometrica* model with the worker as an additional player.
- Value-enhancing take-over may not necessarily be efficiency-enhancing, when the "breach of trust" (Shleifer and Summers) by a new manager is retaliated by the worker's non-cooperation.

Complementarity between Co-determination and Corporatism

- The corporatist wage setting nullifies the efficiency wage discipline. It then becomes institutionary complementary to the participatory hierarchy in which the residual rights of control over uncontractible issues are shared between the employer and the worker. External financing is made more in the form of long-term debt contracts.
- The stockholder governance and the codetermination are not Pareto-rankable. (*TCIA*, ch. 11.2)

Information Sharing and the Stakeholder Society View

- The Hartian sole ownership arrangement cannot resolve the moral-hazard problem of the information-sharing firm (team), in which team members are mutually essential.
- Tirole: ”The stake-holder society view has not been provided with a good theoretical perspective, because multi-task incentives for the manager and an effective arrangement for the division of control rights among the stakeholders are difficult to design.”
- However, contingent shift of control rights between them is feasible.

Information Sharing and Relational CG

- The insiders hold control rights in better than normal states, whereas the relational–monitor takes control rights in bad states and dissolves the team in the worst states. Institutional complementary between RCG and the information sharing architecture (team).
- Double-edged dilemma of RCG: Soft-budgeting or hard-budgeting syndromes.
- Examples of the relational monitor:
  - the main bank in its heyday
  - LBO partners
  - venture capitalists (cf. Kaplan and Stromberg)
  - Government and the state-owned firm.

The Silicon Valley Model as a New Mode of CG

- A complex innovation system is expected to be created by ex post selection of modular products. Gradual, contingent and partial vesting of property rights to entrepreneurs.
- Option value can be created. (Baldwin and Clark)
- Externalities created by tournament may exceed the costs of project duplication, if the final value of an innovative system is expected very high and entrepreneurs' confidence in VC's ability to select the best outcomes is high. (TCIA, ch. 14)

A Design Approach?
The Role of Law

- A game is defined by the set of players, their activated action choice sets, and the consequence function that maps each action profiles to an outcome. Statutory laws, together with technology, constitute elements of the consequence function in the corporate domain.
- Laws affect the incentives and expectations of players and thereby the choice of an equilibrium (an institution). However, law may produce an unintended result.
- Law is a consequence of the game in polity.

Thank you