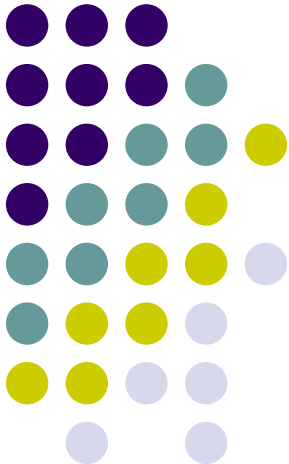


Blurred Boundaries between Firms, and New Boundaries within Firms

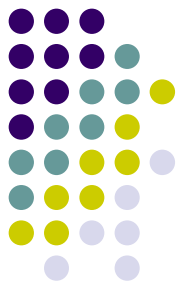
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1. Background

- Vertical specialization in some industries, the development and application of ICT, the increased complexity of technology combinations, and the role of network-forming flagship firms implies a shift toward a more open structure of inter-firm networks;
- MNCs can now be perceived as being embedded in a series of internal and external business networks;
- The process of business network formation simultaneously blurs the boundaries between firms, but may erect new boundaries within MNCs;
- This paper examines the linkages between intra-firm and inter-firm networks



2. Firm Boundaries: A Framework

Figure 1

Closed network relationships	(1) Traditional unidirectional hierarchy	(2) Alliances, equity joint ventures, partnership agreements, etc.
Open network relationships	(3) Organizationally decentralized distributed innovation systems	(4) Open innovation systems, flexible and experimental structures of non-exclusive ties
Non-networked relationships	(5) Inter-subsidary distance, divergence, or competition	(6) Pure market connections, arms length transactions



2. Firm Boundaries: A Framework (Cont.)

- Cells (1) and (6) together provide the conventional dichotomy between markets and hierarchies, which relied upon a parent-driven perception of MNCs;
- Cell (2) was readily incorporated, but little attention was paid to cell (5) because inter-subsidary distance was a natural by-product of the centralized hierarchy depicted in cell (1);
- Recently attention has turned to the *open networks* in cell (4), that are continuously open to extension to new partners and to selective withdrawals;



2. Firm Boundaries: A Framework (Cont.)

- Open innovation network relationships require some element of continuity and stability, and their purpose is to create a platform for future business, unlike arms length transactions or competitor relationships;
- However, the emergence of more open systems for the internal organizational structures of firms (cell [3]) has not much been explicitly addressed;
- As subsidiaries search for an appropriate balance between the open business networks depicted in cells (3) and (4), there has been a transformation in the intra-MNC relationships represented in cell (5).



3. The Context for Restructuring

- The old paradigm based on mass production with its economies of scale and specialized corporate R&D (product scope) has gradually been displaced by a new techno-socio-economic paradigm grounded on dynamic economies of scope in innovation, derived from interaction and diversity;
- The capability to manage a complex international network may lie partly in a firm's specialization in ICT, which allows greater flexibility in network management, and the ability to combine distant learning processes in formerly separate fields;

3. The Context for Restructuring (Cont.)



- Another change in the ICT age has been the rise in intellectual property markets (R&D outsourcing);
- Recent evidence shows that the rising level of international knowledge sourcing within the MNC has entailed a reshaping of the internal firm network, while at a sub-unit level subsidiaries have become relatively more dependent on localized inter-organizational knowledge exchanges;
- The restructuring and intensification of intra-MNC knowledge exchange are essential for subsidiaries to play a more creative role in localized networks.



4. The Evolution of Distributed Innovation

- International business networks derive from a process of dynamic interaction between many actors, which make MNC organizational forms a more complex, hybrid and distributed form of hierarchy;
- The competitive advantage of mature MNCs increasingly stems from their creation of globally connected networks of resources and people;
- More open international business networks for innovation may create a new potential for tensions or conflicts within the MNC, or between subsidiaries and their local external partners;

4. The Evolution of Distributed Innovation (Cont.)



- Since international MNC networks for innovation have been evolving over time, an evolutionary perspective needs to incorporate issues of learning to accommodate continuing and enhanced inter-subsidiary differentiation within the MNC, and differences in the capabilities of subsidiaries.



5. Co-Evolution with the Environment

- MNC headquarters have to allow selected subsidiaries to evolve towards greater autonomy;
- Subsidiaries have to become more embedded in external networks to develop their own independent competence-creating capabilities;
- MNCs have co-evolved with their environment - e.g. the recent growth of innovative efforts in MNC subsidiaries and in their partner companies in China and India has reinforced and itself stimulated further changes in the local institutional environment.



5. Conclusion

- The building of more open networks for innovation, and the organizational restructuring of MNCs have blurred the boundaries between firms, but it has also generated some new boundaries within firms;
- Individual corporate teams or sub-units of larger firms now belong not just to the firm, but also to various business networks;
- What these networks do is to combine internal and external diversity; for the MNC, this requires a more organizationally decentralized and distributed system of innovation, but one that is still selectively connected and integrated within the firm.