YOU CAN'T BUILD IT ALONE:
HOW LEAD FIRMS DESIGN TEMPORARY INTERORGANIZATIONAL NETWORKS

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ABSTRACT

Bridging economic and sociological explanations of organizational governance, this study explores how lead firms design temporary interorganizational networks (TINs). Our arguments, grounded in the transaction cost, capabilities, and the relational embeddedness literatures, provide the basis for predictions connecting project characteristics and TIN design. Using a unique dataset of bridge construction projects, which were mandated to use a TIN structure, we find that these project characteristics drive the design of these interorganizational architectures. Specifically, we predict and find that more diverse projects led to less embedded networks, with a greater number of partners and few prior relationships, whereas more uncertain projects led to highly embedded networks with fewer, better known partners.

INTRODUCTION

How do firms design networks to compete? Despite acknowledging that firms are embedded in a web of prior relationships, questions about the antecedents and consequences of network design choices remain largely unanswered [4]. While optimal design choices are widely understood to be contingent on environmental and internal fit considerations, the precise connection between task requirements and network partner selection is not well understood. Scholars have suggested that firms need special skills in managing network relationships, such as the understanding of the broad technical system [1] and the ability to manage multiple relationships [7]. These skills have become more important as firms increasingly are competing not as single entities, but rather as value chains [5]. That is, firms need to form and manage a group of partners, and rely upon *both* their own and their partners' resources, to compete and satisfy customers.

In addition to lead firm capabilities, the nature of the task and partner relationships also affect network design. For a given task, the firms that take the lead in designing networks face two decisions: how much of the task to delegate or outsource to partners, and with whom to partner. While considerable theoretical and empirical work has explored these issues in buyer/supplier dyads [2] [9] [10] [11], there has been less investigation that holistically considers a lead firm's entire portfolio of interorganizational relationships. To consider how lead firms make these decisions involving task and partner characteristics, we investigate how lead firms design temporary interorganizational networks (TINs).

TINs are lead firm networks that constitute the typical organizational form found in project-based organizing [8]. TIN project collaborations are established to accomplish pre-specified goals and last for a limited time period truncated by a pre-established end point. When the project is completed, the temporary organization literally dissolves [3]. Following Jones and Lichtenstein [6], we define TINs as a lead firm network composed of two or more firms that are designed to complete a specific project over a known time duration. TINs have been observed in a wide range of industrial settings, including

advertising, construction, biotechnology, computers, financial services, fashion, and the public sector. Since existing theories of organizational design and governance were developed through studies of permanent organizational ties, their ability to predict the design of TINs has received little attention. In this way, we aim to extend established theory by investigating these novel, but empirically prevalent organizational forms.

To preview our results, we find that project characteristics significantly affect the design of TINs, but do so in unexpected ways. Our results suggest that project diversity, the number of distinctly different tasks, causes TINs to be designed with weaker tie strength, fewer repeated partners, and more varied partners. Project uncertainty causes TINs to be designed with greater tie strength and more repeated partnerships. However, when it comes to projects of longer duration, we found no connection between project length and partner embeddedness. It may be that for long projects, the benefits from deeper relationships, such as improved coordination and efficiency, are offset by the potential for opportunistic behavior and the need for additional flexibility and resources.

REFERENCES

[1] Brusoni, S., Prencipe, A., & Pavitt, K. Knowledge Specialization, Organizational Coupling, and the Boundaries of the Firm: Why Do Firms Know More Than They Make? *Administrative Science Quarterly*, 2001, *46(4)*: 597-621.

[2] Dyer, J.H. Collaborative Advantage: Winning through extended expertise supplier networks. New York: Oxford University Press, 2000.

[3] Eccles, R. G. 1981. The Quasifirm in the Construction Industry. *Journal of Economic Behavior and Organization, 2*: 335-357.

[4] Gulati, R. 2007. *Managing Network Resources: Alliances, Affiliations, and Other Relational Assets*. New York: Oxford University Press.

[5] Hult, G. T. M., Ketchen, D. J., & Arrfelt, M. 2007. Strategic supply chain management: Improving performance through a culture of competitiveness and knowledge development. *Strategic Management Journal, 28(10)*: 1035-1052.

[6] Jones, C., & Lichtenstein, B. B. 2008. Temporary Inter-Organizational Projects: How temporal and social embeddedness enhance coordination and manage uncertainty. In S. Cropper, Ebers, M., Ring, P.S. & Huxham, C. (Ed.), *Handbook of Interorganizational Relations*: 231-255. London: Oxford University Press.

[7] Kale, P., Dyer, J. H., & Singh, H. 2002. Alliance Capability, Stock Market Response, and Long Term Alliance Success: The Role of the Alliance Function. *Strategic Management Journal, 23(8)*: 747-768.

[8] Lorenzoni, G., & Lipparini, A. 1999. The Leveraging of Interfirm Relationships as a Distinctive Organizational Capability: A Longitudinal Study. *Strategic Management Journal, 20(4)*: 317-338.

[9] Poppo, L., & Zenger, T. Testing alternative theories of the firm: Transaction-cost, knowledge-based, and measurement. *Strategic Management Journal,* 2001, *19(9): 853-878.*

[10] Poppo, L., & Zenger, T. Do formal contracts and relationships function as substitutes or complements? *Strategic Management Journal,* 2002, *23(8): 707-725.*

[11] Williamson, O.E. The economic institutions of capitalism: Firms, markets, relational contracting. New York: Free Press, 1985.