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**Upstream and downstream horizontal R&D networks**


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**Abstract**

The existing literature on R&D networks has focused on networks among firms who compete in the product market (downstream networks). This article develops the literature by casting the analysis in the context of a vertically related industry, where both downstream firms and their upstream suppliers can form horizontal R&D networks. Our analysis suggests that economic factors, such as within-network R&D spillovers, may be the driving forces behind the equilibrium network formations. Moreover, the equilibrium upstream R&D network may have the same architecture as the downstream R&D network or may differ from it. Interestingly, we find that stable networks can be socially optimal, but only in the case where their architectures differ across market tiers. © 2012 Elsevier B.V.

**Author Keywords**

Input suppliers; Networks; R&D collaboration

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