

# COMMUNICATIONS , INNOVATION, AND NETWORKS

## Business Organization, Regional Development

### and Production Networks at Swift Meat Packing and Dell Computer

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#### Abstract

This paper examines how business firms respond to technological change in communications systems by transforming the production networks in which they operate, and assesses the impacts of these changes in business organization on patterns of regional development. Two firm-based case studies -- Swift Meat Packing and Dell Computer -- constitute the research for the paper. The study compares how Swift used the rail and telegraph system in the late 19<sup>th</sup> century to create an innovative network for production and direct marketing of fresh beef to retail butchers, and how Dell is using the Internet and Air Express package delivery system in creating a similarly entrepreneurial network for production and direct marketing of PCs to end users. The networks of both firms established new competitive standards that diffused widely and succeeded in creating broader patterns of change in the economy. These networks, however, were historically specific in their attributes and impacts. In the case of Swift, the rail and telegraph enabled the firm to develop a network on the basis of a vertically-integrated business enterprise organized over an essentially national market space. In the case of Dell, the Internet and Air Express System are enabling the firm to operate as a *dis*-integrated enterprise within a network spread over a fundamentally global market space. The paper builds a taxonomy of the route from the “communications revolution,” to the entrepreneurial responses of the firm, to the production network, to the region. This model seeks to uncover common patterns of transformation during different communications revolutions, and the attributes that make each communications revolution historically unique.