For instance, car dealers and real estate agents already enjoy an on-line search capability through region-wide inventory data bases.

New network services will make it possible for manufacturers to compete anywhere, anytime. Already it is possible to schedule, monitor and coordinate the production of multiple factories in a number of countries from a single location. The linkage via information technology enables firms to become less vertically integrated in the formal ownership-based sense, while increasing the importance of vertical relationships not based on ownership. Manufacturing capacity becomes a commodity that can be accessed almost anywhere in the world using network technology. The same should be possible for retail outlets and other operations.

The retailers of the future will use telecommunications and information systems to capture microlevel data, which the manufacturers will consolidate and process. Networking in the context of manufacturer and retailer relations will imply significant shifts in the division of responsibility and activities between the two.

Manufacturers are taking on functions, such as ticketing, sales forecasting, advertising and in-store services—functions that have traditionally been the responsibility of retailers. Some manufacturers, empowered by their increased access to data and service capabilities, view the retailer of the future as providing space for showing their products. On the other hand, powerful retailers are inducing manufacturers to provide an unprecedented number of services in addition to the products they offer. Companies, such as Wal-Mart, are eliminating third-party distributors and brokers.<sup>5</sup> The availability of shopping channels on television introduces new marketing relations.

The upshot is that, in the information age, it is the manufacturers who are likely to have superior information about price elasticity, market trends and other factors which are not as easily seen by the retailer. However, this shift in the distribution functions may come at the cost of higher investment outlays and greater overall risk than in the past for the manufacturer.

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<sup>&</sup>lt;sup>4</sup> R. Jaikumar and D.M. Upton, "The Coordination of Global Manufacturing", in S.P. Bradley, J.A. Hausman and R.L. Nolan, eds., Globalization, Technology and Competition: The Fusion of Computers and Telecommunications in the 1990s, Boston, MA: Harvard Business School Press, 1993, p.169-83.

<sup>&</sup>lt;sup>5</sup> Janice H. Hammond, "Quick Response in Retail/Manufacturing Channels", in S.P. Bradley, J.A. Hausman and R.L. Nolan, eds., op. cit., 1993, p.185-214.