

With A. H. Segars. (1995) "The Industry-Level Impact of Information Technology: An Empirical Analysis of Three Industries," *Decision Sciences*, Vol. 26(3), 337-368.

As noted by several observers, information technology (IT) has rapidly evolved from ?part of the organizational overhead? into a strategic resource capable of changing patterns of competition within industries [8, p. 275]. However, while this evolution has become part of the fabric for literature exploring the strategic impact of IT, very few studies have been undertaken to determine the specific influence(s) of technology-based competition on industry structure. The development of analytical frames for capturing aspects of industry behavior provides a potentially powerful tool for evaluating the influence strategic IT initiatives may have on current bases of competition. Drawing from the theoretical disciplines of industrial economics and strategic management, this study develops a framework for analyzing longitudinal changes in industry structure. Working within this frame, the study then analyzes the nature and change of structure in three industries during and after the introduction of strategic information technology. The findings suggest that in each of these industries structural characteristics were dramatically altered subsequent to the introduction of competitive-based IT. In two of the industries (airlines and industrial chemicals), early adopters broke away from other industry participants, in effect, forming unique bases of competition. In the remaining industry (drug wholesalers), previously distinct bases of competition consolidated, resulting in a more competitive industry structure than that which existed prior to the technological innovation.