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## **AN EMPIRICAL STUDY ON INTER-ORGANIZATIONAL NETWORK STRUCTURES FOR AUTOMATED VEHICLES**

### **Abstract:**

This study aimed to examine empirically whether rapid changes in the technological environment affect inter-organizational relationships. In the automotive industry, the advantage of cohesive and vertically integrated inter-organizational relationships has been pointed out conventionally. The development of automated driving in the automotive industry, which is the subject of this thesis, is eliciting significant changes in the traditional automotive products and industry structure – changes generally associated with the automotive product structure moving closer to IT products. And, sharply conflicting views are found in previous studies as to whether this traditional inter-organizational network will change. As a methodology, I aimed to clarify empirically what kind of network structure of inter-organizational relations firms is growing with changes in industrial structure by creating a database of actual firm behavior. The database was analyzed using the social network analysis method, and the characteristics of growing firms' organizational network structure were extracted. The results from an analysis of a large number of databases indicated that the technological change from automated driving may have prompted a change in inter-organizational relations toward a horizontal division of labor in the automobile industry in which so-called platform leader companies would emerge.

### **Keywords:**

Inter-organizational network; business ecosystem; platform leadership; Social Network Analysis; Automated Vehicles

**JEL Classification:** M11, O32, M19