

Research on the Automobile Industry Cluster in the Hangzhou Bay Area: An Emphasis on Ningbo's Growth Strategy and Competitive Assessment

This study conducted an investigation into the automobile industry cluster in the Hangzhou Bay Area. An investigation was conducted on the growth plans and competitive positioning of the automobile sector in the Hangzhou Bay Area by using case studies from Japan. The analysis was based on the industrial cluster theory and Abernathy's idea of de-maturation. By examining case studies from the Japanese automobile industry cluster, we have gained valuable insight of the dynamics of the automobile industry cluster in the Hangzhou Bay Area. By employing the Diamond Model and the GEM Model, the analysis indicates that the main enterprises in the car cluster of the Hangzhou Bay Area are experiencing a decline in maturity as a result of technological advancements and a transition towards electrification (EV transformation). This analysis offered valuable perspectives on their worldwide expansion strategies and ability to compete. Moreover, the assessment of the Hangzhou Bay Area's automobile industry cluster included an analysis of the development trajectory of the Japanese automobile industry cluster and its key enterprises, as well as an evaluation of the cluster's status, growth strategies, and competitive strengths. The first chapter provides an overview of the research context, issue statement, goals, participants, and research approach.

This study investigated the car industry cluster in China's Hangzhou Bay Area with the goal of developing a development theory for the Bay Area automobile industry cluster using case study insights. The thesis is divided into nine chapters, from introduction to conclusion. The opening section examines the current situation of the automobile industry cluster and the Bay Area's economic development, including theoretical issues such as the de-maturation theory and the formulation of hypotheses. The second section examines Japan and China's de-maturation and global expansion strategies through case studies, followed by a qualitative analysis of the Diamond Model and the GEM Model. Based on interview and questionnaire survey data, quantitative statistical analysis is performed using the AHP hierarchical analysis approach, with SPSS serving as the analytical instrument to verify three hypotheses.

The distinctiveness and originality of this research can be represented as follows:

1. This research applies Abernathy's de-maturation theory to assess the growth strategy and competitiveness of the automobile industry cluster in the Bay Area from a new perspective that has not been examined before.

2. This research examines the Sino-Japanese Bay Area automobile industry cluster and reveals new insights into the development process, growth strategies, and competitiveness of the vehicle sector in the Bay Area.

3. This research is notable for its concentration on field surveys and validation, specifically targeting 22 firms like as Geely, as well as automobile groups, academic institutions, and governmental authorities.

4. This research is unique because it is one of the few studies that have used qualitative assessment of Porter's Diamond Model and then applied the GEM Model for a quantitative analysis of the competitiveness of the automobile industry cluster. The study utilizes official government statistics and data collected through interviews and surveys to analyze industrial trends. It employs the Analytic Hierarchy Process (AHP) in combination with SPSS software to quantitatively validate the improved competitiveness.

The study analyzed the concentration of the automobile industry in China's Hangzhou Bay Area, with a focus on Ningbo, and Japan's Tokyo Bay Area, namely the Keihin industrial zone. The analysis encompassed the developmental options, characteristics of de-maturation, discrepancies, and fundamental causes. The research focused on analyzing the development process, growth strategies, and competitiveness of the automobile industry cluster in the Hangzhou Bay Area, namely in Ningbo. This analysis was inspired by the successful Keihin industrial vehicle cluster in the Tokyo Bay Area.

Industrial clusters have been acknowledged as a worldwide economic phenomenon. Industries with competitive advantages frequently adopt the specific structure of industrial clusters, regardless of whether they are located in industrialized or developing countries. This research provides a summary of the findings about the automobile industry cluster in the Hangzhou Bay Area. It also projects the future growth strategy, competitive advantages, and improvements in competitiveness of the industrial clusters in the Bay Area.

For the purpose of the study, Geely Automobile from the Hangzhou Bay Area and Nissan from the Tokyo Bay Area's Keihin industrial zone were selected as subjects for in-depth analysis. The study focused on analyzing the structural changes and growth patterns of key parts firms in the car industry clusters of the Japanese and Chinese Bay Areas. This analysis included studying finished vehicle companies such as Geely and Nissan, as well as parts manufacturers like Jinkang, Tuopu, and Xusheng. The study explored advancements in the car cluster in the Hangzhou Bay Area, which were propelled by methods such as electric vehicle (EV) adoption and globalization. The study employed empirical research methodologies to investigate the competitiveness of the car industry cluster in Ningbo, which is a key region in the Hangzhou Bay Area. The findings of the study offer valuable insights for the future development and competitiveness of China's Bay Area automobile industry cluster.

This research offers two main contributions. The study provides novel perspectives on the evolution of the industrial cluster theory, specifically focusing on the developmental aspects of China's Bay Area automobile industry cluster. The study examines the automobile industry cluster in Ningbo, located in the core part of the Hangzhou Bay Area. It explores the competitive advantages and increased competitiveness resulting from the growth plans of the Hangzhou Bay Area industrial cluster.

In addition, this research enhances the case study of the automobile industry cluster in the Hangzhou Bay Area. Prior study has revealed two main deficiencies in the case studies of the automobile industry cluster in the Bay Area. Primarily, the focus of most talks has been on regional development, with only a limited number of discussions exploring the precise development of the automobile sector cluster in the Bay Area. Furthermore, Abernathy's process of de-maturation has been very distinctive. Another notable deficiency is the limited amount of research that compares the automobile sector clusters in Japan and China. This study focuses on the car industry cluster in Ningbo, which is the central region of the Hangzhou Bay Area. It contributes to the theory of automobile industry clusters in developing countries.

This research specifically examines the automobile industry cluster in the Hangzhou Bay Area, where private firms are flourishing. The results of this study are considered a significant point of reference for automobile industry clusters in other locations or countries.