

A Study of the Structural Elements of and Empirical Analysis on Concerted Actions

1. Background of study

A concerted action is a practice adopted by a number of enterprises to restrict each other's business activities by establishing mutual understanding. The Objective is to reduce competition and increase profits. From the perspective of competition law enforcement, the key issues are finding out whether mutual understanding on a concerted action exists and how it is reached. Explicit mutual understandings are easy to identify or prove. However, is difficult to detect tacit collusion and find direct evidence. Economic evidence, such as market condition and plus factors, is needed to presume the existence of mutual understanding between enterprises.

Since direct evidence of concerted actions is rather difficult to obtain, the practices of the competition authorities of other countries are referred and adopted domestically. First, the Fair Trade Law was amended to introduce a leniency policy to cope with illegal concerted actions and offer rewards to whistleblowers to sabotage the incentive structure that causes the collusion in a concerted action in order to acquire direct evidence. At the same time, the focus of the investigation of a concerted action is to set on use of circumstantial evidence to prove the existence of mutual understanding. Moreover, admissibility of evidence and burden of proof are decisive in the administrative litigation on concerted action cases. In practice, it is difficult for competent authority to acquire direct evidence of a concerted action. In order to regulate concerted actions effectively, the FTC amended the related provisions regarding concerted actions in the Fair Trade Law in February, 2015, to empower the FTC to presume the existence of mutual understanding by circumstantial evidence. The amended Paragraph 3 of Article 14 stating that, "The mutual understanding of the concerted action may be presumed by considerable factors, such as market condition, characteristics of the good or service, cost and profit considerations, and economic rationalization of the business conducts."

The investigation of the competition authority into concerted action can be divided into different stages such as detection, collection of evidence, etc. However, with limited resources, it is hard to investigate all the markets one by one with the same intensity. Under such circumstances, detection of concerted action plays an important role in the beginning of an investigation. It can provide the competent authority with the possible clues and point out industries that need a closer watch. Therefore, application of the structural approach to detect concerted actions in the market becomes relatively important. Furthermore, in the era of digitalization and information, as Big Data and Artificial Intelligence (AI) technologies continue to improve, the waves of digital economy propel enterprises to innovate, and many new business models are developed. The development and application of algorithms is bound to have an impact on the market structure elements of concerted actions. For this reason, in this study, theories and research associated with the structural elements of concerted actions are collected and reviewed, while the FTC's case statistics and the Industry and Service Census Report of the Directorate-General of Budget, Accounting and Statistics are applied to analyze the structural characteristics of industries that illegal concerted actions disposed of by the FTC. It is intended to identify the key areas of law enforcement and set the focus on industries that need a closer watch to do investigation effectively and deter illegal conduct.

2. Methods and process of study

Methods of literature review and empirical analysis adopted Social Science Research are applied in this study. Literature review is adopted to sort out information from well-known domestic and foreign journals and monographs of international competition law organizations and major countries. The empirical analysis method is adopted to analyze

the structural characteristics of industries that illegal concerted actions disposed of by the FTC according to the case statistics of FTC's and the Industry and Service Census Report of the Directorate-General of Budget, Accounting and Statistics thus to gain a comprehensive understanding of theory and practice related to such issues.

As for the arrangement of chapters, Chapter 1 is the foreword that gives a brief description of the motivation to study. Chapter 2 explains the market structure elements that are advantageous for enterprises to engage in concerted actions and how to apply economic evidence to presume the existence of concerted actions conducted through tacit collusion. In Chapter 3, the influence of digital economy on concerted actions is inducted and analyzed. In Chapter 4, the FTC's case statistics and the Industry and Service Census Report of the Directorate-General of Budget, Accounting and Statistics are analyzed for the empirical analysis on the structural characteristics of industries that illegal concerted actions disposed of by the FTC. At the same time, the illegal cases of concerted actions disposed of by the FTC will be inducted to sort out the economic evidence and plus factors to be adopted to presume existence of mutual understanding between enterprises with only the appearance of concerted action. Chapter 5 is the conclusion and suggestions. Also, the market economic evidence and the facilitating mechanisms, other plus factors, and circumstantial evidence in the illegal concerted cases that the FTC has preceded are presented in the appendix at the end of the paper.

3. Main suggestions

The structural approach is adopted to analyze the nature of the 212 illegal concerted action cases the FTC disposed of between Feb. 1992 when it was established and the end of Dec. 2019. The structural characteristics of industries that illegal concerted actions disposed of by the FTC involved are also analyzed based on the FTC's case statistics and the Industry and Service Census Report of the Directorate-General of Budget, Accounting and Statistics. Meanwhile, the market economic evidence, facilitating mechanisms, other plus factors and circumstantial evidence used in the illegal concerted action cases the FTC proceeded are sorted out. The following conclusion and suggestions are reached:

- (1) The illegal concerted action cases in which five or less enterprises were sanctioned accounted for 68.4% of the dispositions issued regarding concerted action. The more enterprises involved, the less dispositions issued, It is indicated that the number of participating enterprises in most illegal concerted action cases was small, or some of the concerted actions were conducted through industrial, commercial and freelancer groups, such as trade associations. This proves the theory that although multiple enterprises may be needed to form a concerted action, but the more members there are, the harder it is to be consolidated the concerted action.
- (1) Trade associations are the principal offenders in illegal concerted action cases, followed by retail businesses, electricity and gas supply businesses, non-metal mineral product manufacturers, and food and feed product manufacturers. The products or services these industries involve are an indication that the level of product differentiation in concerted actions is limited. In other words, this proves the theory that the higher the homogeneity, the easier it is for enterprises to achieve mutual understanding.
- (3) There were 68 illegal concerted action cases in which the offenders belonged to industrial, commercial or freelancer groups and 58 of them were trade associations or occupational unions. This explains that a trade association may be established for the purpose of maintaining the common interests of the members; however, restricting competition between members can lead to concerted actions. Therefore, trade association or groups can be one of the important considerations in the theory of facilitating practices for concerted action.

- (4) In 10 of the illegal concerted cases the FTC disposed of, the market structural evidence included were: product characteristics, business scale and cost differences between the participants, characteristics of market and industrial structure, overall economic environment factors, evidence of facilitating practices and other plus factors or circumstantial evidence.
- (5) In economic theories, the main elements of market structures that are advantageous for concerted actions to take place include small business scales, high concentration, high entry barriers, high operation efficiency, low innovation and high industrial growth. By sorting out the FTC's statistics on concerted actions cases and Service Census Report of the Directorate-General of Budget, Accounting and Statistics and analyzing with Tobit models, the results show that, the elements with more significant impact on the frequency of concerted action are concentration and innovation. When the concentration element increases by 1%, the frequency of concerted action increases 1.4268 times. When the innovation element increases by 1%, the frequency of concerted actions decreases 3.7068 times. Therefore, empirical analysis also supports that the higher the concentration in the market which the enterprises belong to, the more frequently concerted actions will happen. Meanwhile, the higher the innovation in the market which the enterprises belong to, the less likely the concerted actions will happen. The competition authority should particularly keep these two important elements in mind.
- (6) As the establishing of a concerted action is closely associated with market structure, when handling related cases that the market which involving enterprises belong to has the characteristics of high concentration, high entry barrier, low product heterogeneity, similar business scales and costs between enterprises, and slow changes in market demand, the FTC should keep a closer watch and investigate thoroughly.
- (7) To prove the existences of mutual understanding between enterprises in a concerted action carried out through tacit collusion, the FTC can first consider market structure elements before looking for evidence of the meeting of minds. Then looking for the evidence of facilitating practices regarding pricing, exchange of messages, and the trade association or group in such market structure. Then make a comprehensive assessment through such indirect evidence from consideration of plus factors and circumstantial evidence, as well as considering the product characteristics and market structure.
- (8) Along with the development of digital economy, new business management styles have emerged. After the application of pricing algorithms in market competition, the automatic market and competitor detection practices enables businesses to get a quick and firm grasp of the ever-changing market information and make the best response. This has considerable effect on the structural elements of market for forming concerted actions. For example, conventionally, the number of businesses and entry barriers are the two most important market structure elements. However, in the environment where enterprises adopt pricing algorithms to compete, the fewer the businesses there are the more likely it will lead to a collusion is still an important condition but not a necessary requirement anymore. The competition authority must be aware of the impact of pricing algorithms on entry barriers, the countermeasures of exiting businesses in the market, and the plans of potential competitors to make a quick entry.