

Study on early-warning mechanism of necessities of life

Chinese Taipei is a small and open economy, in which most of the production materials of daily necessities are imported from abroad. Besides, the fluctuations of material prices triggered by commodity market or political events are imperative. However, the press, council representatives and consumer protection groups often have the impressions of price asymmetry transmissions. In other words, they always reach the common view that output prices of daily necessities constantly respond faster to cost increases than they do to decreases. Besides, the rise of the prices of the vegetable and fruit during typhoons or droughts also makes people more likely to believe the phenomenon of price asymmetry. Hence, the government is often criticized by the people for not fulfilling its obligations to maintain price stability, and most importantly, for not properly regulating collusion or other illegal behaviors, such as hoarding and profiteering of important commodities. However, price controls not only may result in commodity shortages and black market, but also may upset market mechanism. This, in turn, would incur damages of neutrality and independence of competition authority. Therefore, by using economic analysis, this project firstly investigates the essence of price fluctuations and examines the question whether or not the TFTC, a competition authority, should deal with price cases. Secondly, we choose several important necessities of life as the target and collect their output prices and input costs to create a dataset of market observations. Thirdly, we employ the ECM to develop an econometric model, which is employed to investigate how output prices respond to cost changes to see whether or not output prices respond faster to cost increases than they do to decreases. This may in turn help the TFTC to implement the monitoring and early-warning mechanism of necessities of life. Finally, we analyze the possible factors that may have an impact on market demand-supply and price. These studies, in turn, may be used to develop a workable guideline for the competition authority to regulate price rises triggered by monopoly pricing or other anti-competitive behaviors. Based on the detection of APT, this kind of early-warning mechanism not only can monitor market price fluctuations, but also can provide some evidences for the TFTC to deal with anti-competitive and price gouging cases. Therefore, the results obtained in this project can be used as a reference for the public, the press, and the TFTC to appreciate the following understandings: (1) the function of market mechanisms and the interaction among economic agents; (2) how the interactions between firms' cost and consumers' demand fundamentals shape the prevailing prices in market of daily necessities; (3) to shape both the government the public with a common view so as to facilitate the law enforcement. As to the other industrial countries such as the EU, the US, and Japan, although they also price monitoring system to stabilize market prices,

however, these measures mostly focus on movements in the aggregate price level or inflation rate. And most importantly, these implementations fall into the realm of monetary policy and belong to the area of competence of central bank. As to the regulations on relative prices of individual commodity (such as public utilities, gasoline, and other daily necessities), these matters are mostly conducted by regulation body and local government. It is an international trend for competition authority not to daily regulate market prices and to leave the price controls to the other regulation authorities. As for the monopoly pricing, in the US, along with some Common law countries, the exploitative abuses are even considered to be legal for the sake of preserving the integrity of the market mechanism. However, the jurisdiction system of Chinese Taipei tends to be Civic law. Hence, the exploitative abuses are considered to be illegal and are regulated by the TFTC. As for the price control measures in Chinese Taipei, price gouging cases are mainly regulated by a task force under supervision of the Executive Yuan to coordinate various regulation bodies. Under such a framework price controls are mainly conducted by regulation authorities and competition authority instead focus its policy on both regulating anti-competitive behaviors (such as monopoly pricing pertaining to exploitative/exclusionary abuses, collusion, RPM, unfair trade practices) and advocating economic policies needed to promote competition.

Under such circumstances, if the TFTC uses the APT as the circumstantial evidence to prove collusion, then how can the TFTC address the link between output prices and input costs? If a firm earns excess profits and is characterized by APT, then how can the TFTC identify the excess profits is a long term phenomenon or only a transitional? Should the TFTC directly involve the cases of monopolistic and duopolistic pricing or instead draw a line in defining the respective competences of competition authorities and regulatory bodies in managing joint actions by these two entities where such a necessity arises?

In order to address these issues, this project chooses 10 items of necessities of life, which are characterized by production process being simple, using unpatented technology, low value-added, and material costs being higher than in most other sectors, as the targets to investigate the relationship between input costs and outprices. These necessities include cement and concrete, wheat and flour, coal and cement, soybean and soybean oil, raw milk and milk, natural gas and LNG, paddy and rice, billet and steel bars, corn and feed, waste paper and corrugated board. Under a standard model widely used by the literature (e.g., Peltzman 2000, Borenstein et al. 2002, Ma and Chien, 2011), this project performs an ECM analysis to investigate the relationship output price and input cost so as to identify whether or not the APT exists in these 10 markets. The purpose is to provide the TFTC with price-cost evidences to monitor the markets of necessities of life. In contrast with the common, the evidence of monthly or yearly data shows that positive price asymmetry cannot be applied to

all industries, especially to those industries with rapid productivity growth. This result shows that domestic market mechanism performs quite well and also confirms the efficiency of law enforcement of the TFTC. Besides, since there exists a positive relationship between positive price asymmetries and industry's labor cost or material cost growth, and since these daily necessities fall into the realm of labor intensive industry, the empirical result seems to imply that Chinese Taipei's income inequality are getting more and more serious. This ground is that the salary raise in these labor-intensive industries is not enough to compensate productivity growth (or even when some positive effect in this direction can be found, it is not enough to compensate productivity growth.), so that labor cost goes down. At this point, the absence of APT (positive or negative) logically implies a growing of firms' profits. This can be seen by the fact that the labor income share fell from approximately 44% to 39% over the period 1991-2012.

As to the detection of illegal behaviors, it is important to note that the appearance of APT does not authoritatively indicate that monopoly pricing or collusion without any exception. It merely shows that output prices respond faster to cost increases than they do to decreases. There are many reasons to explain APT other than monopoly pricing, such as menu costs and government regulations. Therefore, the APT can only be used as a monitoring and early-warning mechanism. However, regarding to administrative process, it can provide a critical advantage in terms of saving investigation costs and enhancing operational efficiency. Therefore, it might be said that the APT can provide a preliminary evidence and valid rules of practice to facilitate the enforcement of law by guiding the TFTC in the application of legal texts to market facts. This may, in turn, help the TFTC to determine if the staff should conduct the investigation on the price-rising cases. However, the fact whether or not APT firms violates the FTC law still depends on the investigation of the TFTC into the market. This implies that the TFTC should conduct further market studies, should investigate possible breaches of prohibitions against anti-competitive agreements under the law, and should examine all evidences regarding the infringement. The TFTC cannot bring criminal proceedings against firms solely on the ground of the evidence of APT. One worthy of mention is that the APT falls into the realm of quantitative analysis and hence it needs reliable and detailed market data. Therefore, the TFTC should collect as much data as possible as long as the process of searching is not too time consuming, meaning that It should strengthen its coordination of market data with DGBAS in regard to market data under the umbrella of the Executive Yuan. Finally, this project provides six suggestions as follows:

1. We suggest that the TFTC use the APT as the approach to develop an early-warning mechanism to monitor the impact of material costs on the price of necessities of life.

2. Based on the international trend and the best practices in law enforcement, it is not appropriate for the TFTC to conduct price controls or to deal with price gouging cases. The competition authority would move only against relevant anti-competitive behaviors.
3. The TFTC can use the APT, supplemented by the evidence of price parallelism, to detect the existence of collusion and to quantify its impact on market prices.
4. Based on the growing household income inequality, the TFTC should consider to employ the APT to identify the exploitative abuse stipulated in Sections 2 and 3 of Article 9, especially in the markets for daily necessities so as to protect consumer welfare.
5. The TFTC should obtain reliable and detailed price data of necessities from the DGBAS through the coordination of the Executive Yuan.
6. The goal of price stability is more complicated and difficult than it might appear. The competition authority at most can only deal with relative prices changes in individual market caused by anti-competitive behaviors. Therefore, the TFTC should seek to coordinate with other relevant authorities in order to reach consistent remedies for price stability. The TFTC also should coordinate multiple jurisdictions filings throughout the world. And, more importantly, the TFTC should in prior monitor improper market conducts and implement precautionary arrangements to avoid the very problem of market instability.