

Impact Factors Concerning Price Fluctuations of Fruits and Countermeasures

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Abstract

This paper relates to certain impact factors concerning price fluctuations of fruits and countermeasures. Price fluctuations of fruits can be attributed to a plurality of factors, but the supply-demand relation is a predominant factor. The quantity supplied is subject to extreme weather, production cost and circulation cost, the quantity demanded is illustrated with reference to the residents' food consumption structure upgrading, and the impact of macroeconomic policies represented by the money supply is further examined. In addition, the measures for price stability are suggested in respect of market and government.

Keywords

Price Fluctuations; Supply-demand Relation; Macroeconomic Policies.

1. Research Background

Since the adoption of reform and opening up policy, China has shifted to the fast track of economic growth, ranked as the world's top 1 country for production and consumption of fruits, and its trading of fruits has thronged into the world's top level. However, China's fruit market is not stable and especially over the years, the fruit market has been susceptible to complexity and volatility partly because of market price fluctuations, and partly because of "inaccessible trade" between fruit growers and consumers on the fruit market. Market price of fruits not only matters for the "fruit basket" of residents, but also for the "pocket" of fruit growers. The market price fluctuations of fruits relates to the income level of fruit growers and dealers, significantly impacts the general price level and in turn, concerns the material living standard of consumers. The price rise of fruits will result in the growth of the consumer price index (CPI). As suggested in the data published by the National Bureau of Statistics, the national CPI rose by 2.5% on year-on-year basis in 2020, with the price of fresh fruits increased by over 3.5% on year-on-year basis in December 2020. More than an economic issue, the market price fluctuations of fruits also concerns the basic interest of consumers and fruit growers, and further decides on the healthy and sustainable development of the agricultural products market and on the social harmony and stability. In this regard, it is of great significance to investigate the price fluctuations of fruits.

2. Research Contents

2.1. Supply-demand Relation

The supply and demand of fruits are subject to a plurality of factors, a change in one or more factors will lead to some change in the supply and demand sides on the fruit market and in turn, trigger price fluctuations of fruits. Under the influence and limitation of weather, soil and other natural conditions, the supply of fruit products seems to be special because total quantity supplied is limited and relatively unstable;

in addition, like other agricultural products, fruits are growing in a long cycle. Unlike industrial goods manufactured in standard process, in case of price change in fruits, fruit producers may not be able to quickly adjust the quantity supplied, so the actual adjustment of quantity supplied may not be in time. Until the production is properly adjusted, some other factors leading to a change of supply and demand of agricultural products may arise from a new production cycle of fruits, which in turn causes a price change and so on.

The residents' food consumption structure upgrading has also led to an increase of demand of fruits. Over the years, the residents' food consumption structure has taken on some changes with the economic development and income change as indicated by less consumption of food and vegetables and more consumption of meat, fruits, and aquatic products.

The supply of fruits is subject to the following three factors:

2.1.1 Extreme weather

As more extreme weather events have occurred in recent years, the output of fruits decreases and there is a gap in supply and demand, which in turn boosts the price increase. For example, Shandong and Shaanxi, known as main production regions of apples in China, reduced the overall output by about 30% due to extreme weather events caused by El Nino last year. Consequently, the stocks cannot cater to the market demand, so a shortage of supply boosts the price increase.

2.1.2 Production cost

Production cost includes land rent, cost of labor and cost of machines. A change in production cost will influence the production price of fruits, then acts on the retail price. Production cost acts on price by restraining the supply of fruits. Referring to the micro-economic concept of theory cost, assume that other factors are the same, an increase of production cost of fruits will squeeze the margins of fruit producers. In this case, fruit growers may reduce output and quantity supplied, which in turn boosts the increase in production price of fruits.

2.1.3 Circulation cost

A change in circulation cost also influences the price fluctuations of fruits. Unlike certain kinds of agricultural products such as grain, cotton and oil, the circulation efficiency in relation to fruits is required to be higher, so a change in circulation cost would directly act on the retail price of fruits. Assume that other factors are the same, an increase in circulation cost will squeeze the margins of fruit producers, the quantity of fruits that wholesalers, retailers and other intermediaries are willing to supply will be reduced, which in turn boosts an increase in retail price of fruits.

2.2. Money Supply

It is generally considered that an increase in the money supply would cause inflation, while drive the overall price level by acting on total demand. Specifically for fruits, an increase in nominal income would lead to a marked increase in the consumption demand of low-income earners for fruits, which in turn drives the price increase. In addition, the money supply not only increases the nominal income, but also means an increase in actual cost of labor or opportunity cost in the industry chain of fruits, and acts on the price of production materials used for growing fruits. An increase in cost will restrain the quantity supplied in future and in turn drives the price increase of fruits. A change in the money supply as a result of the monetary policy will act on the price of fruits with respect to supply and demand.

3. Research Conclusion

3.1. Conclusion

1. Over the years, the market price of fruits has been volatile like “roller coaster”, but generally tends to increase in fluctuations.

2. The price fluctuations of fruits depend on the supply-demand relation. Extreme weather conditions, production cost, circulation cost and money supply lead to price volatility of fruits by influencing the supply-demand relation.

3.2. Measures for Price Stabilization

Low price of fruits will discourage fruit growers and lead to a decrease in supply, while expensive price of fruits will impose a financial burden on fruit growers and discourage the willingness to consume. It is advised to capitalize on the roles of the government as visible hands and the market as invisible hands, if we want to stabilize the price of fruits and alleviate market fluctuations.

It is advised that the market should make more fruit varieties available on market, alleviate market fluctuations, leverage the advantages of e-shopping platforms, improve the supply capability, stabilize price and benefit both consumers and fruit producers.

It is advised that the government should seek the improvement in respect of:

(1) Intensify the construction of farmland infrastructure, improve the farmland water conservancy facilities, make preparations for drought relief and disaster response, reduce the impact of extreme weather conditions on production activities of fruits, and keep fruits supplied stably.

(2) Improve circulation channels

The government should properly do top-level design and provide policy guidance, improve circulation channels, build more refrigerated storehouses and refrigerated transportation chains, encourage enterprises to have trials in new flat-type channels, streamline circulation process, and reduce loss and circulation cost of fruits.

(3) Step up the extent of oversight

The government should mend up the loopholes of the price oversight system, instruct fruit growers how to grow fruits, and guide the expectation of residents; and crack down on online spreading of rumors and hypes, in order to keep the market order fair and reasonable.

References

- [1] HU Weitong. Price fluctuations and transmission path of fruits in China, Price: Theory & Practice, 2014.
- [2] PAN Fan. Tracking the influence of food price changes on people's livelihood, Economic Daily, 2019.
- [3] DING Xiao wen. Reasons analysis of fruit price fluctuation based on vector auto-regressive model, Business Economy, 2020.