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A Comparative Study of Price Indices of Some Essential Agricultural Commodities

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Abstract- This research paper deals with the comparative study of rise in the prices of various commodities which are very commonly used in India. The rise in prices are studied for past twelve years i.e. from the year 2005 to 2016. For this, some commonly used food grains such as rice, wheat, jowar and bajra are studied for their variations in the prices year wise. Also the most popular and required types of vegetable such as onion, tomato and potato are considered for comparative study of fluctuations in prices. This research paper also gives the behavioral changes in the prices of the mostly desired fruits such as banana, apple, mango and orange. To study all about these, Index numbers are used which is a useful way of expressing economic data time series and comparing commodities. With the help of time series analysis and index number theory, it is tried to study the comparative variations among the prices of various products which are very important in our day to day life. In this paper, an attempt is made to study the inflation rate, reasons behind the fluctuations and its impact on farmers and customers. Also it is tried to study whether these variations are very significant or not.

Key Words: - Price index, inflation rate, time series, variation, fluctuation, trend..

I. INTRODUCTION

In India, inflation or price rise is very important concept because the people of lower strata are most severely affected by the rising prices, and if the price rise is in essential commodities, damage is more severe. The sharp increase in prices of wheat and rice will have an inflationary impact on essential commodities as open market prices of both commodities were ruling slightly higher than above the poverty line prices. In the last five years, the prices of essential commodities have gone up by nearly 72 percent. It can be observed that demand as well as supply, both factors are responsible for rise in prices of essential commodities. Increasing population which itself is a major cause of rising demand, changing food habits are also giving push to demand pull inflation. On the supply side, unfavorable weather conditions also resulted in the short supply of commodities and consequently pushed their prices up. Lack of warehousing facilities, cold storages also results in the post-harvest losses. Thus, the price rise is caused by several factors like hoarding, population explosion, low productivity, natural calamities, evil motives of dishonest businessmen, black marketing etc. In this research, we considered food grains such as rice, wheat, jowar and bajra to have a comparative study about their price variations and trend in price index numbers. This research is about only these prominent food grains because rice is India's pre-eminent crop and is the staple food of the people of the eastern and southern parts of the country. Also wheat is second largest cereal in India after rice. Jowar is an important cereal crop after rice and wheat in India. Bajra is one of the major crops in India. Bajra is a coarse grain crop and considered to be the poor man's staple nourishment and suitable to cultivate in

dry land. Similarly, among the vegetables, this research deals only with the study of potato, onion and tomato.

Potato is the fourth most important food crop with great potential as a food source for future generation in the world as well as in India. This crop is known for sustaining millions of population. Also onion and tomato are some of the most important type of vegetables which are widely used in India. Because of its huge demand all over the country, its production is very important and changes in prices of these basic vegetables is very useful to study. For fruits, this research mainly deals with Mango, Orange, Apple and Banana. Mango being an important fruit crop in India is the most widely cultivated fruit in India. Banana is an important fruit crop in India. The global production of banana is around 102028.17 thousand tons of which India contributes 29.19%. The apple business in India is major production of the fruit. Orange occupies nearly 40% of area for its cultivation in India. And because of its nutritional values and medicinal properties, it is again one of the popular fruits in India. With the help of past data about prices of these commodities, we tried to show some important results as follows:

Statistical Analysis:

This paper studies the time series of some of the essential food grains such as wheat, rice, jowar and bajra. Also the most commonly used vegetables such as onion, potato and tomato are considered. It also studies the time series of mostly consumed fruits such as banana, mango, apple and orange. All these agricultural commodities are studied for their trend of variations in the price indices for the time series from year 2005 to 2016. For this, we have taken 2004