Forecasting Weekly Vegetable Prices

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# Chapter I

## INTRODUCTION

### Background of the Study

The fluctuation of vegetable prices is a global concern in both developed and emerging economies. The need for vegetables as a primary source of essential nutrients and dietary variety has grown as urbanization and global population growth simultaneously. Consequently, the dynamics of vegetable pricing have grown more intricate and significant, having an effect on not just consumer choices but also food security, economic stability, and agricultural practices. Understanding the factors driving these price fluctuations is paramount for policymakers, farmers, consumers, and the broader food industry.

Vegetables are a major life necessity for urban and rural residents, and the vegetable market massively supports rural economic development. Fluctuations in vegetable prices affect farmers’ income, quality of life, and decision-making regarding vegetable planting. Therefore, issues regarding maintaining price stability have long been focused on government policies. In recent years, the price of vegetables has exhibited dramatic and frequent volatility, which caused a series of negative effects on stakeholders in the supply-chain, e.g., farmers, logistics, wholesale, retail, and consumers. In view of the above adverse effects on stakeholders, it is of crucial importance to filter out key factors that relate to price fluctuations, targeting effective monitoring of real-time abnormal fluctuations. (Chen et al., 2018)

Price fluctuation is a complex issue with far-reaching consequences, especially for vulnerable populations. While higher prices may appear beneficial for farmers, the inherent volatility poses significant risks, potentially leading to substantial losses for agricultural stakeholders. Often attributed to imbalances in market fundamentals, where demand surpasses supply, this phenomenon has a profound impact on small-scale farmers. (Huka, Ruoja, Mchopa, 2014)

According to Statistics Food and Agricultural Organization (FAO) (2018), agricultural products account for a large proportion of the market as a necessity for daily consumption, and their prices play a critical part in consumer spending and agricultural household income. The supply and demand in a given year determine the prices of agricultural products. While an undersupply of agricultural items raises prices and burdens consumers, an oversupply of agricultural products causes vegetable prices to increase and causes financial losses to farming households.

In the Philippines, vegetables price height has been a major problem for past years. Consumers were complaining of higher food prices, reflected not only in vegetables but in poultry and pork meat as well, and selected fish variants. Some prices have gone up by as much as 66 percent from last month alone. The Department of Agriculture officials have blamed the higher prices on numerous factors such as the ongoing pandemic, the devastating typhoons that destroyed crops, and the unwillingness of poultry and hog raisers to farm a new following the glut and the spread of the African swine fever, respectively. (Ocampo, 2021)

As stated by Vibas and Raqueño (2019), Agricultural commodities significantly impact a country’s export earnings and economic performance. Price fluctuations affect farmers, consumers, and public agencies. The Department of Agriculture in the Philippines recognizes that local market-driven commodity pricing, notably for fruits and vegetables, have prompted government action.

Nueva Vizcaya Agricultural terminal Inc. general manager Gilbert Cumila said, Vegetable prices in the Philippines continue to rise as demand exceeds supply. Wholesale prices of vegetables increases due to the demand of people. This significantly affect the way consumers purchase vegetables to sustain their necessities.

Vegetable prices in Nueva Vizcaya is rapidly increasing week by week. Consumers are having hard time to provide necessities due to this reason. This study will forecast the changes of vegetable prices in Nueva Vizcaya to serve as guide to the consumers directly affected by the problem.

This research aims to describe the weekly vegetable prices in Nueva Vizcaya and identify the models that will forecast weekly vegetables. The research oath to determine the best model that can be used to forecast weekly vegetable prices in Nueva Vizcaya.

### Objectives of the Study

The researchers will forecast weekly vegetable prices in Nueva Vizcaya by accomplishing the following:

1. Describe the weekly vegetable prices in Nueva Vizcaya.
2. Identify models that will forecast weekly vegetable prices in Nueva Vizcaya.
3. Determine the best model that will forecast weekly vegetable prices in Nueva Vizcaya.
4. Forecast the best model for weekly vegetable prices in Nueva Vizcaya.

### Significance of the Study