The data for the study was obtained mainly from secondary sources due to its quantitative nature. The quarterly prices of construction materials were gathered from journals published by the Nigerian Institute of Quantity Surveyors (NIQS), while the quarterly inflation rate was obtained from the Central Bank of Nigeria (CBN) statistical bulletin and the National Bureau of Statistics (NBS) bulletin. The data was presented in tables and graphs for clearer representation.

The stratified random sample technique was used for sample collection. An analysis of the percentage contribution of each material to the overall material cost was conducted on two sample duplexes and bungalows. The results showed that cement constituted 12.07%, reinforcement 16.67%, granite 6.52%, block 5.93%, long span roofing sheet 5.12%, sharp sand 3.79%, and paint 3.63%. Materials with a contribution above 3% were selected, totaling 53.73% of the total cost of materials for the sample buildings.

The cumulative inflation rate was calculated by adding the inflation rate of the previous quarter to that of the current quarter. The average price change for a basket of items from one period (the base period) to another period (the current period) was measured using a composite price index, where each item was weighted according to its importance in the basket. The weighted aggregate price index was then used to compute the price index of the seven selected construction materials, using their weight as the percentage they contributed to the overall material cost.

The formula for the weighted aggregate price index (WAPI) is:



Where:

WAPI = weighted aggregate price index

Pni = price of commodity in the current year or given year.

Poi = price of commodity in the base year

Wi = weight for the commodity.

In simple average, each item in the group is regarded as having equal importance. But in

actual fact, items may vary in importance. To obtain a representative average, each item was

multiplied by a suitable ‘weight” corresponding to its importance and dividing the sum of the

products by the sum of the weights.

The weighted mean was calculated using the following relationship:



Where:

X = weighted mean

Wi = weight

Xi = observation

Therefore, to obtain a representative average for the weighted aggregative price index, the

WAPI and the weighted mean are combined mean to arrive at equation 3.



Where: AWAPI = average weighted aggregative price index,

The construction material inflation rate (CMIR) is thus derived by equation 4



To examine the inflationary trends in Nigeria, the inflation rate was plotted against each quarter. To determine the inflationary trend in the construction industry, the average weighted aggregate price index was used, with 2002 as the base year.

To investigate if inflation affects the prices of the selected construction materials uniformly, the prices of these materials were plotted against the cumulative inflation rate in quarters. A simple regression analysis was also performed to test for statistical relationships between inflation rate and the price of construction materials.