

# Historical Cost Indexes

The following tables are the estimated Historical Cost Indexes based on a 30-city national average with a base of 100 on January 1, 1993.

The indexes may be used to:

1. Estimate and compare construction costs for different years in the same city.
2. Estimate and compare construction costs in different cities for the same year.
3. Estimate and compare construction costs in different cities for different years.
4. Compare construction trends in any city with the national average.

## EXAMPLES

1. Estimate and compare construction costs for different years in the same city.

A. To estimate the construction cost of a building in Lexington, KY in 1970, knowing that it cost \$915,000 in 2018.

$$\text{Index Lexington, KY in 1970} = 26.9$$

$$\text{Index Lexington, KY in 2018} = 188.1$$

$$\begin{array}{rcl} \text{Index 1970} & \times & \text{Cost 2018} \\ \hline \text{Index 2018} & & = \quad \text{Cost 1970} \\ 26.9 & \times & \$915,000 \\ \hline 188.1 & & = \quad \$130,853 \end{array}$$

$$\text{Construction Cost in Lexington, KY in 1970} = \$130,853$$

B. To estimate the current construction cost of a building in Boston, MA that was built in 1980 for \$900,000.

$$\text{Index Boston, MA in 1980} = 64.0$$

$$\text{Index Boston, MA in 2018} = 242.4$$

$$\begin{array}{rcl} \text{Index 2018} & \times & \text{Cost 1980} \\ \hline \text{Index 1980} & & = \quad \text{Cost 2018} \\ 242.4 & \times & \$900,000 \\ \hline 64.0 & & = \quad \$3,408,750 \end{array}$$

$$\text{Construction Cost in Boston in 2018} = \$3,408,750$$

2. Estimate and compare construction costs in different cities for the same year.

To compare the construction cost of a building in Topeka, KS in 2018 with the known cost of \$800,000 in Baltimore, MD in 2018

$$\text{Index Topeka, KS in 2018} = 190.0$$

$$\text{Index Baltimore, MD in 2018} = 199.7$$

$$\begin{array}{rcl} \text{Index Topeka} & \times & \text{Cost Baltimore} \\ \hline \text{Index Baltimore} & & = \quad \text{Cost Topeka} \end{array}$$

$$\begin{array}{rcl} 190.0 & \times & \$800,000 \\ \hline 199.7 & & = \$761,142 \end{array}$$

$$\text{Construction Cost in Topeka in 2018} = \$761,142$$

3. Estimate and compare construction costs in different cities for different years.

4. Compare construction trends in any city with the national average.

$$\text{Index Detroit, MI in 2018} = 214.2$$

$$\text{Index San Francisco, CA in 1980} = 75.2$$

$$\begin{array}{rcl} \text{Index Detroit 2018} & & \times \text{Cost San Francisco 1980} = \text{Cost Detroit 2018} \\ \hline \text{Index San Francisco 1980} & & \end{array}$$

$$\begin{array}{rcl} 214.2 & & \times \quad \$5,000,000 \\ \hline 75.2 & & = \quad \$14,242,021 \end{array}$$

$$\text{Construction Cost in Detroit in 2018} = \$14,242,021$$

4. Compare construction trends in any city with the national average.

To compare the construction cost in Las Vegas, NV from 1975 to 2018 with the increase in the National Average during the same time period.

$$\begin{array}{rcl} \text{Index Las Vegas, NV for 1975} & = & 42.8 \\ \text{Index 30 City Average for 1975} & = & 43.7 \end{array} \quad \begin{array}{rcl} \text{For 2018} = & 222.3 \\ \text{For 2018} = & 215.8 \end{array}$$

$$\begin{array}{rcl} \text{A. National Average escalation} & = & \frac{\text{Index} - 30 \text{ City 2018}}{\text{Index} - 30 \text{ City 1975}} \\ \text{From 1975 to 2018} & & \\ & = & \frac{215.8}{43.7} \end{array}$$

$$\begin{array}{rcl} \text{National Average escalation} & & \\ \text{From 1975 to 2018} & = & 4.94 \text{ or increased by } 494\% \end{array}$$

$$\begin{array}{rcl} \text{B. Escalation for Las Vegas, NV} & = & \frac{\text{Index Las Vegas, NV 2018}}{\text{Index Las Vegas, NV 1975}} \\ \text{From 1975 to 2018} & = & \frac{222.3}{42.8} \end{array}$$

$$\begin{array}{rcl} \text{Las Vegas escalation} & = & 5.19 \text{ or increased by } 519\% \\ \text{From 1975 to 2018} & & \end{array}$$

Conclusion: Construction costs in Las Vegas are higher than National Average costs and increased at a greater rate from 1975 to 2018 than the National Average.













