



# Cost and price forecasting analytics



In today's unpredictable economic landscape, the needs for precise and robust cost and price forecasts are universal---whether for private firms, government agencies, or investors. The Economic and Statistical Consulting (ES) team at KPMG LLP (KPMG) offers tailored approaches to help organizations make informed and evidence-based decisions in key areas such as financing, budgeting, and strategic planning.

## About us

Our team combines extensive knowledge and experience in econometrics, data science, and financial analysis to deliver reliable forecasts for price and cost projections. We don't just offer off-the-shelf cost and price forecasts; we provide specialized insights by leveraging the deep and diverse experience of our professionals in applying rigorous approaches to develop robust forecasts and inform evidence-based and forward-looking decision making. Our methods rely on well-developed statistical and econometric models as well as powerful techniques from machine learning that efficiently detects underlying trends for more accurate forecasting. Our services are of great value to organizations operating across countries and sectors, from local governments grappling with unique price trends to multinational corporations operating in diverse markets

The ES team has been providing various types of cost and price forecasts to a wide range of organizations, including:

- Longer-term CPI forecasts in different countries in the Americas and Europe;
- Regional price indices for metropolitan areas; and
- Industry-specific cost and price indices developed using a bottom-up approach based on industry-specific production cost components.

## Value propositions across sectors

### **Region cost and price forecasts for tax revenue projections:**

Local governments can benefit from our regional cost and price forecasts, crucial for operational budgeting, to accurately project sales or property tax revenue when local price trends are different from the nation. Our team has developed regional cost and price forecasts for several large regional agencies, including a transit agency whose operating budget is partly financed through local tax levies.

### **Construction cost indices for design-build and other infrastructure projects:**

Organizations involved in infrastructure can take advantage of the specialized cost indices our team can develop for their complex projects. In doing so, our team supports the need to accurately project construction inputs for effective budgeting and vendor negotiations. KPMG has developed custom construction input cost indices, allowing for more effective budgeting and real-time monitor of economic dynamics in the industry, to help organizations better manage supply chain or inflationary shocks.

### **Global operations cost forecasting:**

For organizations with international reach, understanding cost and price trends in each individual market they operate is imperative for effective strategic and budget planning.

**Cost and price forecasts incorporating climate risk:** For organizations concerned with the divergent expectations in prices of energy, materials, natural resources, labor, carbon prices as well as inflation across different climate pathways, our team can help incorporate impacts of such risks into the cost and price projections under different climate scenarios, aiding in both short-term and long-term strategy development.

## Project Spotlight 1:



### Cost forecasting for a multinational infrastructure company

**Their challenge:** The company needed long-term forecasts for capital expenditure and operating costs across multiple countries to value their infrastructure assets, for which off-the-shelf indices and forecasts were not available.

**Our approach:** Our team developed country-specific cost forecasts using machine learning and econometric models, tailored to the company's specific operating models and cost structure. Using a machine learning approach, KPMG developed a long-term country-specific cost forecasts for each of the key inputs of the company's operations. A visualization tool was then developed to more easily present and visualize the forecasts, allowing the company to streamline their decision-making process.

## Project Spotlight 3:



### Construction cost forecasting for a regional rail operator

**Their challenge:** The rail agency required accurate cost forecasts for major capital projects in the absence of a local Construction Cost Index (CCI).

**Our approach:** Our team developed a custom CCI for the region through 2032 via a development of a multi-model forecasting based on identification of the operator's major cost components, providing a reliable basis for budgeting and price negotiation with potential vendors. Our custom solution reduced budgeting uncertainties and assisted the agency with better capital spending planning, further serving as the basis for a multi-model forecasting tool to predict Virginia's CCI through 2032.

## Project Spotlight 2:



### Tax revenue forecasting for a public transit agency

**Their challenge:** The transit agency needed to forecast tax revenues and understand why local costs were outpacing the national CPI.

**Our approach:** Our team developed a regional price index specific to the region, enabling more accurate budgeting and tax revenue forecasting. The index allowed the agency to adjust their budget and tax levies more accurately, ensuring financial sustainability.

## Project Spotlight 4:



### Cost forecasting for a multinational consumer goods company across climate pathways

**Their challenge:** The company wanted to understand the impacts of climate risks across different climate pathways on costs of each of its individual business segment as well as its global operations.

**Our approach:** Our team developed climate scenario-specific forecasts for the company's key production inputs and quantified the financial impacts of the climate-related risks on the company through 2050. KPMG's analysis served as critical inputs in the company's strategy making especially with respect to material sourcing, product mix and geographical relocations of its outsourced manufacturing operations across the globe.

For more on KPMG cost and price modeling and forecasting, please contact:

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