

news

- Buildings
- Business & Labor
- Education
- Environment
- Power & Industrial
- Information Technology
- Construction Technology
- Transportation

Click here for
a free trial
subscription to:

McGraw Hill
CONSTRUCTION **ENR**

search the **DODGE**
project marketplace

search the **SWEETS**
product marketplace



be the first to know
subscribe to our **FREE**
e-newsletter today!

PRINT THIS STORY | E-MAIL THIS STORY | SUBSCRIBE

Brought to you by

**KIMMEL &
ASSOCIATES**

business & labor

COSTS

Multiyear Jobs, Even Small Ones, Are Biggest Risk For Overruns (5/26/2003)

By Peter Reina

Cost projections on multiyear construction projects, particularly in transportation, may seem on target in the beginning but are at great risk for overruns, say Danish researchers in the second phase of a major study of international jobs dating back several decades. But they also point out that even small projects can be budget-busters.

For every year of a project—from inception to completion—the average construction cost escalation is nearly 5%, according to the newest study by Aalborg-based Aalborg University's Dept. of Development and Planning. "Decision-makers and planners should be highly concerned about delays and long implementation phases," the study contends.

The findings stem from continuing analysis of nearly 250 international transportation projects together valued at \$90 billion. In a previous report on that sample, university researchers found that 90% of projects overshot budgets with no sign of improvement over 70 years (ENR 7/15/02 p. 11).

The new findings focus on cost implications of project duration and size. "We are not offering explanations," says Bent Flyvbjerg, study leader and department professor. "But when you take a large number of projects, there is a trend."

To identify overrun causes, the Aalborg team reviewed 111 projects in its database with information on implementation periods. These included 33 bridges and tunnels, 38 railroads and 40 highways. Projects in the first group took longest to implement, averaging 6.6 years. Railroads were quicker, at 6.3 years, while highways were completed in 4.3 years. Analysts eliminated as unrepresentative 10 jobs that lasted longer than 13 years.

Because of different implementation periods, "cost escalation must be expected to be different for the three types of projects," say the Danish analysts. However, the nature of the project was not, in itself, significant. "The influence of length of implementation phase on cost escalation is not statistically different for rail, fixed link (bridges and tunnels) and road projects," they add.

Project complexity could not be adequately modeled, but researchers believe it was not significant. "Length of implementation phase is the essential predictor, and, as long as more evidence has not been found, it must be considered a stand-alone," they claim.

The Aalborg team goes on to refute claims that larger projects are more prone to cost hikes than smaller ones. Analysis of 131 jobs finds no clear link between size and cost hikes above forecast budgets, if no other factors are considered. Looking at project types separately, fixed links appear to be more inclined to cost hikes with increased size. Railroad and highway projects, however, show no such tendency. Of project types, only highways tend to be getting bigger as time passes. In terms of actual costs at constant prices, highway job increases seem to grow at 2.3% a year. The Danish study found no significant trends among fixed link and railroad projects.

Flyvbjerg admits the study could not obtain sufficient data on project delays but believes it is still comprehensive. Others agree. "It establishes a prima facie case to ensure that all [project] promoters who want their figures believed...have to say what mechanisms they have in place to prevent cost overruns," says Phil Goodwin, professor of transport policy at University College, London.

PRINT THIS STORY | E-MAIL THIS STORY | SUBSCRIBE

Search This Site

 go

Computer
Guidance

Industry Links

**KIMMEL &
ASSOCIATES**

**ENR's
FILES FROM
THE FRONT**