

Executive Summary

Purpose

The Florida Legislature requires that the Florida Department of Transportation (FDOT) assess the economic benefits of its five-year Work Program. FDOT conducts this analysis approximately twice per decade. This macroeconomic analysis estimates the effect of transportation investments on the state's economic competitiveness and compares the overall benefits and costs of FDOT's transportation investments.

The FDOT Work Program plans and budgets for five years of transportation projects and is developed collaboratively with metropolitan planning organizations and local governments in Florida. The Work Program includes transportation investments in highway, transit, rail, seaports and waterways, airports, spaceports, and related infrastructure.

Methodology

This macroeconomic analysis began with the investments in the FDOT Work Program that covers Fiscal Years 2018-19 through 2022-23. Approximately 90 percent of the total Work Program investments were considered in this analysis, with aviation, rail, and intermodal access investments excluded due to limitations in data and modeling. The Work Program contains investments in support functions - product development, operations and maintenance, and administrative costs. 90% of these costs were included, consistent with the share of product-specific investments.

Virtually all Work Program expenditures produce two streams of benefits – short-term and long-term. The analysis does not consider short-term effects of construction spending. Instead, it focuses on long-term benefits to overall economic efficiency.

Industry-accepted models were used to estimate direct benefits of highway, safety, seaport, and transit investments. The outputs of these modeling processes were then applied to a nationally recognized economic model to estimate overall economic benefits to the state. These include indirect benefits, such as business expansion due to lower costs, and induced benefits to the economy, such as additional consumer spending related to greater job growth.

Together, the direct, indirect, and induced benefits for both users of the transportation system and the economy at large reflect one measure of economic impact of these investments. FDOT calculated a benefit-cost ratio by dividing the present value of the benefits by the present value of the investment. In addition to the benefit-cost ratio, FDOT also estimated other measures of economic impact: change in gross state product, economic output (productivity), and employment.

Findings

Over the years 2019 to 2048, Florida is projected to realize four dollars of cumulative personal and business economic benefit for each dollar spent on the FDOT Work Program between 2019 and 2023.

With adjustments for the present value of future benefits, total monetized benefits are projected to be approximately \$164 billion in 2018 dollars.¹ Additional benefits are summarized below:

Present value of user benefits from personal travel	\$86 billion
Present value of economic benefits from business travel	\$78 billion
Total present value of benefits	\$164 billion
Present value of Work Program budget (costs)	\$41 billion
Estimated benefit-cost ratio	4.0
Present value increase in personal income	\$72 billion
Present value increase in gross state product	\$61 billion
Present value increase in output	\$99 billion
Average increase in annual employment	31,000

Note: Values are presented in 2018 dollars, discounted at four percent to a present value in 2020

This analysis is based on economic trends prior to COVID-19. To test the sensitivity of this analysis to changes in investment level, the analysis was re-evaluated for both a 10 percent reduction and a 10 percent increase in the total Five-Year Work Program. In these scenarios, the estimated benefit-cost ratio varied from 3.9 to 4.2, and the other economic impacts generally varied within 10 percent of the baseline analysis.

¹ Calculation of a benefit-cost ratio requires discounting all benefits and costs to the present day. Separately, costs and benefits must also be converted to a consistent dollar-year using inflation factors. This study uses 2018 constant dollars, a discount rate of four percent, and a present value year of 2020.