

# Measuring the Economic Impact of High-Speed Rail Construction for California and the Central Valley Region

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The nation's first high-speed rail project is under construction in California's Central Valley as of the date of this report. This research analyzes the immediate economic impacts, focused on employment and spending generated by California High-Speed Rail (HSR) Construction Package 1 (CP1) in the Central Valley and the rest of California.

## Study Method

A two-pronged approach is used that combines original economic analysis and modeling with case study vignettes that explore the economic impacts through the lens of a several businesses and individuals directly impacted by this phase of HSR development.

The economic forecasting and policy analysis tool used for this research was developed by Regional Economic Models, Inc. (REMI). The REMI Model is a dynamic, multi-region economic simulation model that encompasses input-output relationships,

calibrated to regional data for user-designated regions. For this project, the researchers designated four regions: Madera County, Fresno County, Merced County, and the Rest-of-California.

While the economic modeling presents a big picture understanding of the impacts of the HSR project within the Central Valley and the Rest-of-California, it is also important to recognize that this project is about the personal impact to individual people and individual companies. The vignettes are divided into two major categories: (1) firms directly engaged in CP1-related work, and (2) firms relocated as part of the HSR project. A key goal in this portion of the research was both to validate aspects of the economic modeling approach used (i.e., concrete evidence of jobs created and the type of indirect and/or induced impacts experienced on the ground) as well as to personalize the HSR spending impacts and subsequent reinvestment in the Central Valley and California economy.

## Findings

Overall, the economic analysis suggests that CP1-related spending (forecasted through to 2019) will lead to more than 31,500 additional jobs (both part-time and full-time) by the year 2029. Growth is concentrated in Fresno County, with the number of additional jobs estimated at more than 15,500. The analysis considers job growth across a number of alternative scenarios, converting the raw jobs estimates to full-time equivalent job-years. Under the most conservative HSR spending scenario considered, over the 15-year period evaluated, more than 25,000 full-time equivalent job-years are created. This amounts to 14,900 jobs per billion (real) dollars of spending, or a cost of approximately \$67,200 per job-year.

The REMI Model suggests that direct, indirect, and induced employment are all significant for various regions in the model. The direct and induced effects are greatest in the regions which are the focus of spending, i.e., Madera and Fresno Counties, while the indirect employment effects are greatest in Merced and the Rest-of-California. In terms of occupations, the main effects are in construction-related occupations and management.

The case study vignettes presented here are consistent with an ongoing series of reports from the CHSRA that have documented numerous cases of new business activity, new employment, and revitalized lives because of work being done that is necessary to build this railroad. Most of the managers in the firms surveyed for this report stated or implied that they were hopeful for additional contracts beyond the work they performed in CP1. The research team's sense of the owners and employees of the firms forced into a disruptive and sometimes expensive process of relocation because of HSR's future track location is that they see themselves as participants in an investment that truly pays off only when the high-speed passenger trains are running.

## Conclusions

Overall, this research documents that the spending associated with CP1-related activities in California's Central Valley has led, and will lead to, significant economic impacts through increased employment compared to a baseline policy scenario that assumes no additional HSR spending. Conservatively, more than 25,000 full-time equivalent job-years will be created at a total cost-per-job of approximately \$67,200. This falls within the typical range of estimates for other major transportation infrastructure investment projects identified in the literature, which range from \$41,000 to \$92,000 per job-year. During conversations with several companies working on the HSR project, interviewees described how the contracts often led to additional hiring and provided examples of some of the additional spillover economic impacts that occurred. Interviews with a small number of relocated firms provided insight into some of the challenges faced during the process, as well as how the HSR contract has led to new opportunities.

## About the Authors

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## To Learn More

For more details about the study, download the full report at [transweb.sjsu.edu/research/1627.html](https://transweb.sjsu.edu/research/1627.html)



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