



**NEVADA TRANSPORTATION ISSUES**  
**AN ECONOMIC AND FISCAL OVERVIEW**

**PREPARED FOR:**

**NEVADA HIGHWAY USERS COALITION**

**April 2007**



## GENERAL OVERVIEW

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- Applied Analysis and Hobbs, Ong & Associates were retained by the Nevada Highway Users Coalition to review and analyze the economic and fiscal impacts associated with transportation system improvement delays.
- This analysis includes two primary components
  - A cost-escalation analysis
  - An economic, fiscal and social impact assessment
- This analysis utilizes a number of assumptions about project costs, inflation, timing and demand. It is intended to provide a preliminary framework for analytical discourse; it is not comprehensive in nature.



## Part I

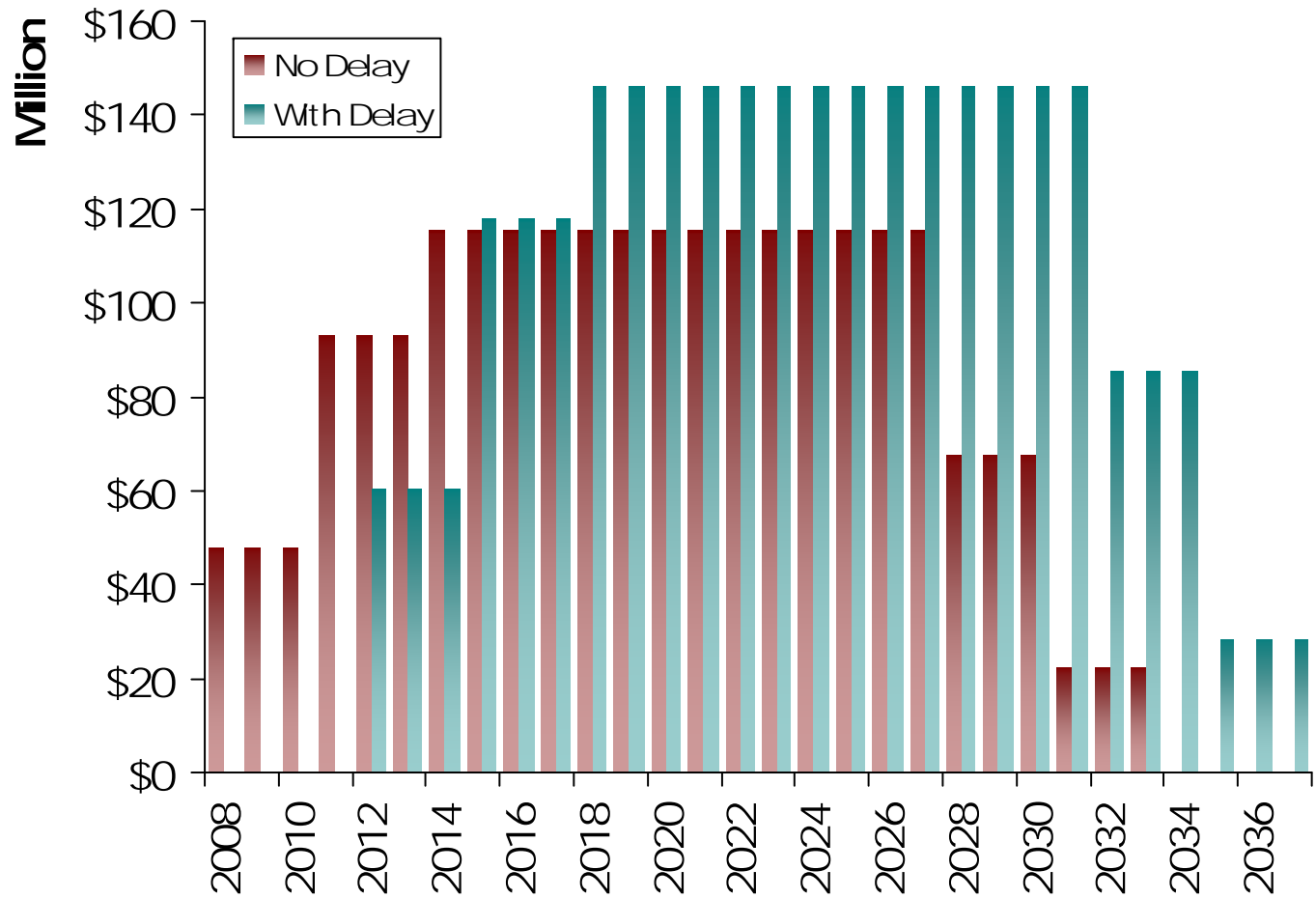
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# The Financial Cost of Delay



# I-15 PROJECT COST COMPARISON

*Escalations in construction cost and financing cost result in an additional cost of \$611 million to Nevada taxpayers.*

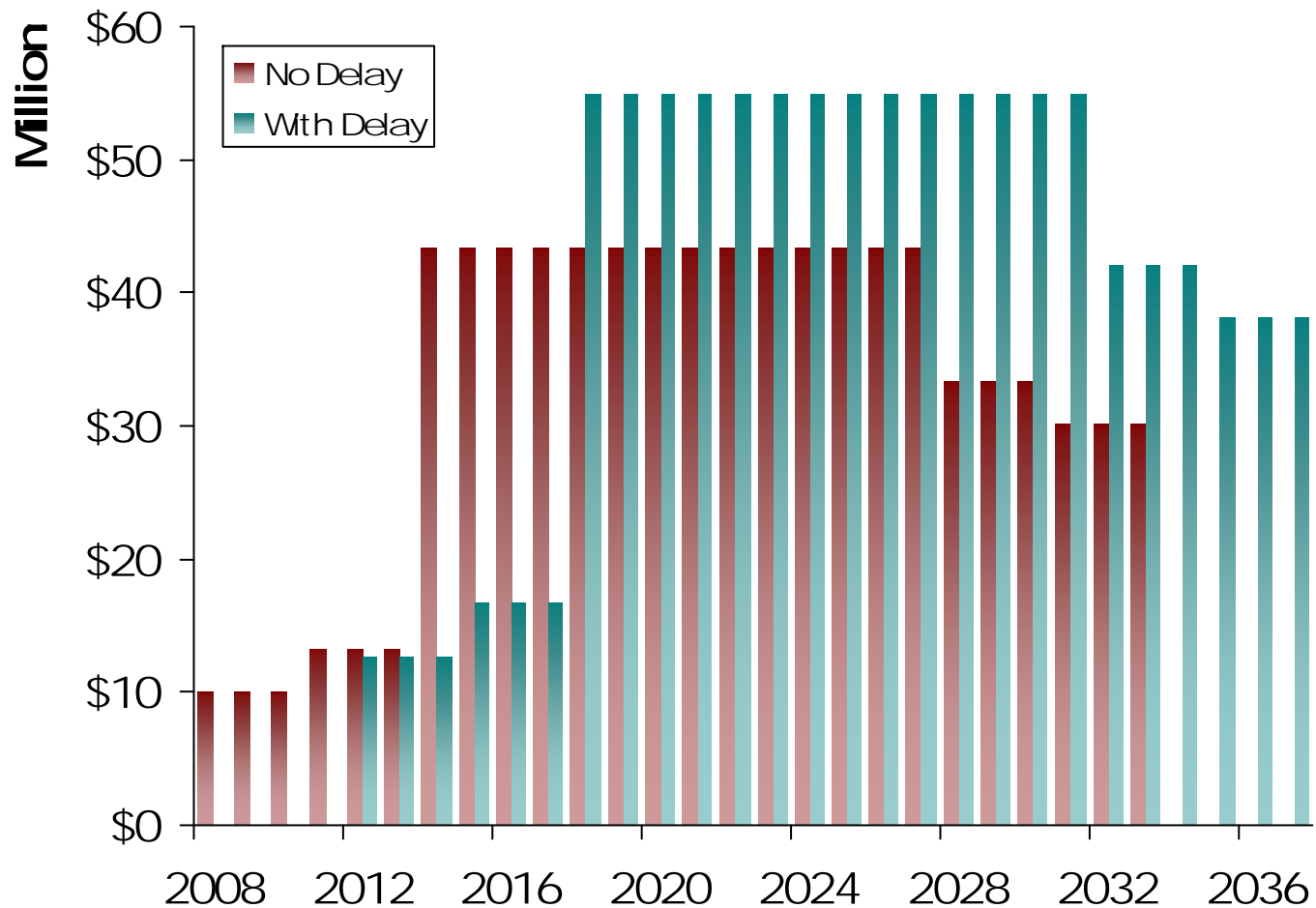


Sources: PFM; Hobbs, Ong & Associates; and Applied Analysis



# I-80 PROJECT COST COMPARISON

*Escalations in construction cost and financing cost result in an additional cost of \$229 million to Nevada taxpayers.*



Source: PFM; Hobbs, Ong & Associates; and Applied Analysis



# THE RESULT

## CONSTRUCTION COSTS & FINANCING COSTS

|                                                       | I-15<br>Project | I-80<br>Project | Projects<br>Total |
|-------------------------------------------------------|-----------------|-----------------|-------------------|
| <b><u>Baseline Expenditure Schedule</u></b>           |                 |                 |                   |
| Baseline Par Amount                                   | \$1,576         | \$ 592          | \$ 2,168          |
| Baseline Debt Service Costs<br>(Principal & Interest) | \$ 2,313        | \$ 868          | \$ 3,181          |
| Baseline Interest Costs<br>(Interest Only)            | \$ 736          | \$ 276          | \$ 1,013          |
| <b><u>Five Year Delayed Expenditure Schedule</u></b>  |                 |                 |                   |
| Delayed Par Amount                                    | \$ 1,992        | \$ 748          | \$ 2,740          |
| Delayed Debt Service Costs<br>(Principal & Interest)  | \$2,923         | \$ 1,097        | \$ 4,020          |
| Delayed Interest Costs (Interest Only)                | \$ 931          | \$ 349          | \$ 1,280          |
| <b>Incremental Increase in Debt Service Cost</b>      | <b>\$ 611</b>   | <b>\$ 229</b>   | <b>\$ 840</b>     |
| <b>Incremental Increase in Interest Cost</b>          | <b>\$ 194</b>   | <b>\$ 73</b>    | <b>\$ 267</b>     |
| <b>Percentage Increase in Project Cost</b>            | <b>26.4%</b>    | <b>26.4%</b>    | <b>26.4%</b>      |

(in millions)



## Part II

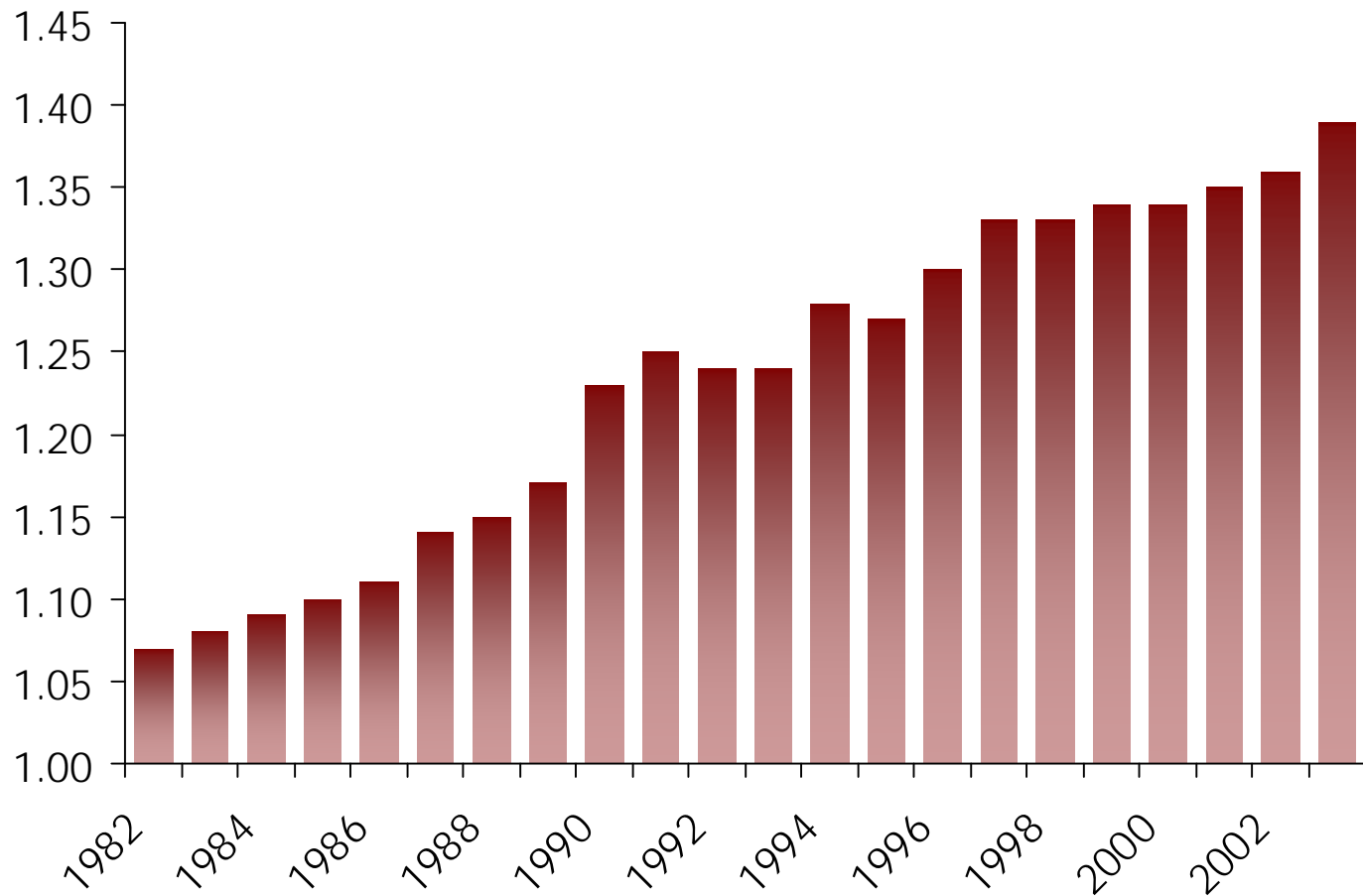
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# Economic, Fiscal & Social Impacts



# TRAVEL TIME INDEX

*Southern Nevada's Travel Time Index is now the 10<sup>th</sup> worst in the nation and is roughly equivalent to that in New York City.*



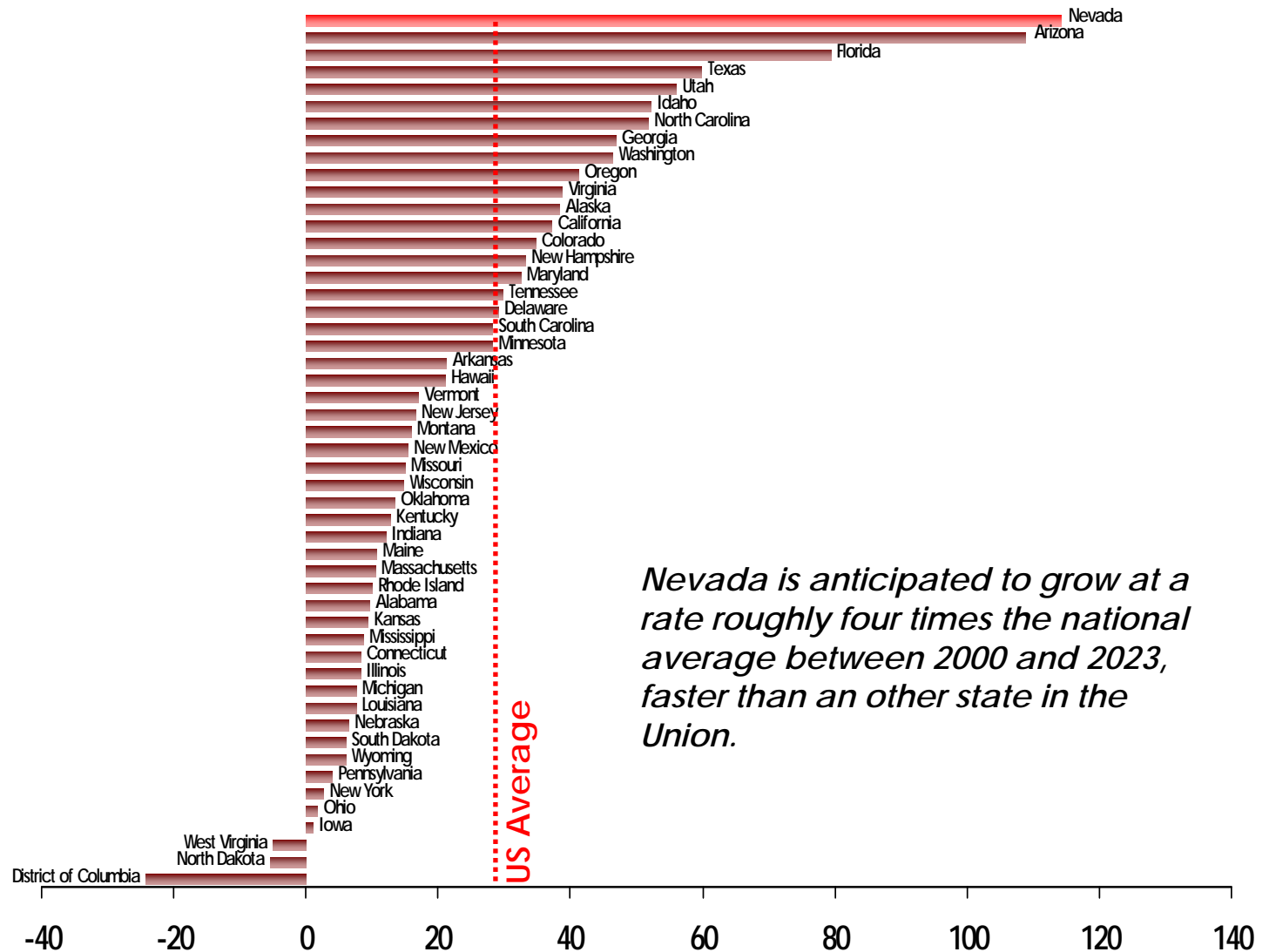
Source: Texas Transportation Institute, *2005 Urban Mobility Study* (2006).





NEVADA TRANSPORTATION  
*an economic and fiscal overview*

# PROJECTED STATE POPULATION PERCENTAGE GROWTH RATES 2000 - 2030



*Nevada is anticipated to grow at a rate roughly four times the national average between 2000 and 2030, faster than any other state in the Union.*

Source: U.S. Census Bureau, Population Division, Interim State Population Projections (2005).



## IMPACT COMPARISON

### INCREMENTAL COSTS VS. CONGESTION COSTS

- The Texas Transportation Institute estimated that traffic delays cost the average southern Nevadan \$269 during 2003. This rate has increased by roughly 13 percent annually since 1982.
- Assuming that this rate increases by a conservative three percent per year and that the cost of delay in the balance of the state is roughly half that in southern Nevada, total delay costs statewide will be approximately \$27 billion during the next 20 years.



# INCREMENTAL COST-BENEFIT ANALYSIS

## INCREMENTAL COSTS VS. TRAVELER SPENDING

|                                                                                       |           |
|---------------------------------------------------------------------------------------|-----------|
| Total Visitor Volume                                                                  | 51.4 M    |
| Estimated Spending Per Visitor                                                        | \$718     |
| Total Annual Visitor Spending                                                         | \$36.9 B  |
| Share of Visitors Traveling by Ground Transportation                                  | 55.0%     |
| Annual Spending from Ground Trans. Visitors                                           | \$20.3 B  |
| Estimated Visitor Spending During the Useful Life of Proposed Improvements (20 Years) | \$406.0 B |
| Estimated Incremental Cost of Tourism Improvements                                    | \$3.8 B   |
| Estimated Break-even Point                                                            | 0.94%     |
| Tourist Visitation Threshold                                                          | 5.3 M     |
| Total Visitor Volume Threshold                                                        | 0.51%     |

Sources: Nevada Commission on Tourism, *Discover the Facts* 2006; Las Vegas Convention and Visitor Authority; Reno-Sparks Convention and Visitors Authority; and Applied Analysis.



# NEVADA INDUSTRY MATRIX

## PRODUCTION, DEMAND, IMPORTS AND EXPORTS

|               | Net<br>Industry<br>Production | Total<br>Commodity<br>Demand | Total<br>Exports | Total<br>Imports |
|---------------|-------------------------------|------------------------------|------------------|------------------|
| Agriculture   | \$1,083                       | \$404                        | \$531            | \$854            |
| Mining        | \$3,574                       | \$84                         | \$1,785          | \$62             |
| Construction  | \$22,803                      | \$17,891                     | \$3,010          | \$-              |
| Manufacturing | \$10,302                      | \$13,030                     | \$7,735          | \$27,201         |
| TCPU          | \$11,561                      | \$4,872                      | \$3,115          | \$2,653          |
| Trade         | \$18,873                      | \$13,238                     | \$3,760          | \$3,100          |
| FIRE          | \$31,794                      | \$15,554                     | \$15,422         | \$9,602          |
| Services      | \$51,304                      | \$17,517                     | \$24,114         | \$8,205          |
| Government    | \$10,214                      | \$9,970                      | \$2              | \$499            |
| Other         | <u>\$(303)</u>                | <u>\$1,248</u>               | <u>\$646</u>     | <u>\$1,778</u>   |
| <b>Total</b>  | <b>\$161,205</b>              | <b>\$93,809</b>              | <b>\$60,121</b>  | <b>\$53,952</b>  |

Notes:

(1)TCPU: Transportation, Communications and Utilities; FIRE: Finance Insurance and Real Estate.

(2) Figures in millions.

(3) Figures will not sum as intermediate line items are omitted from this table.



# ECONOMIC IMPACT SUMMARY

## HIGHWAY AND ROAD CONSTRUCTION

|                                            |                    |                        |
|--------------------------------------------|--------------------|------------------------|
| <b>Highway Construction Spending</b>       | <b>\$1,000,000</b> | <b>\$3,800,000,000</b> |
| <b><u>Employment (in person years)</u></b> |                    |                        |
| Direct                                     | 7.7                | 29,260                 |
| Indirect                                   | 2.5                | 9,500                  |
| Induced                                    | <u>3.1</u>         | <u>11,780</u>          |
| <b>Total</b>                               | <b>13.3</b>        | <b>50,540</b>          |
| <b><u>Wage and Salary Payments</u></b>     |                    |                        |
| Direct                                     | \$441,294          | \$1,676,917,694        |
| Indirect                                   | \$104,517          | \$397,163,954          |
| Induced                                    | <u>\$106,897</u>   | <u>\$406,210,082</u>   |
| <b>Total</b>                               | <b>\$652,708</b>   | <b>\$2,480,291,730</b> |
| <b><u>Economic Output</u></b>              |                    |                        |
| Direct                                     | \$1,000,000        | \$3,800,000,000        |
| Indirect                                   | \$254,676          | \$967,768,800          |
| Induced                                    | <u>\$262,550</u>   | <u>\$997,690,000</u>   |
| <b>Total</b>                               | <b>\$1,517,226</b> | <b>\$5,765,458,800</b> |



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